

PSYCHOLOGICAL ABSTRACTS

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PUBLISHED MONTHLY, WITH TWO ISSUES DURING DECEMBER, BY

THE AMERICAN PSYCHOLOGICAL ASSOCIATION
PRINCE AND LEMON STS., LANCASTER, PA.

Business Offices: PSYCHOLOGICAL REVIEW COMPANY
LANCASTER, PA., AND PRINCETON, N. J.

Subscription, \$6.00 per year; Foreign, \$6.25.

Entered as second-class matter February 5, 1927, at the post-office at Lancaster, Pa., under the Act of March 3, 1879.

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GENERAL

1. Adams, G. *Psychology: science or superstition?* New York: Covici Friede, 1931. Pp. 290. \$2.50.—A popularly written critico-historical survey of modern psychology. Chapter headings are as follows: *Psychology in America, Today and Yesterday, Psychology before 1890, The Introspection of William James, The Early History of American Psychology, The Conservatism of E. B. Titchener and the Liberalism of Stanley Hall, The Psychoanalysis of Sigmund Freud, The Analytical Contributions of Alfred Adler and Carl Jung, The Effect of Psychoanalysis upon American Psychology, Mental Tests and Mental Hygiene, The Behaviorism of John B. Watson, The Purposive Psychology of William McDougall and Gestalt Psychology, The Psychologies of Today, But Is It Science?* Bibliography, explanatory outline of psychological terms, index.—J. C. Spence (Clark).

2. Adams, G. P., & Montague, W. P. [Eds.] *Contemporary American philosophy*. Vol. I. New York: Macmillan, 1930. Pp. 450. \$6.00.—Personal statements of belief by a number of representative American philosophers. Most of the papers are more or less autobiographical. The authors and subjects are as follows: G. H. Palmer, *Introduction*; G. P. Adams, *Naturalism or Idealism*; H. B. Alexander, *The Great Art which is Philosophy*; A. C. Armstrong, *Philosophy and its History*; J. E. Boodin, *Nature and Reason*; H. C. Brown, *The Philosophic Mind in the Making*; M. W. Calkins, *The Philosophic Credo of an Absolutistic Personalist*; M. R. Cohen, *The Faith of a Logician*; G. W. Cunningham, *A Search for System*; D. Drake, *The Philosophy of a Meliorist*; G. J. Ducasse, *Philosophical Liberalism*; W. G. Everett, *In Vestigiis Veritatis*; W. Fite, *The Impersonal Point of View and the Personal*; W. E. Hoeking, *Some Second Principles*; T. De Laguna, *The Way of Opinion*; and J. A. Leighton, *My Development and Present Creed*. Following each statement is a bibliography of the author's publications.—N. L. Munn (Pittsburgh).

3. Adams, G. P., & Montague, W. P. [Eds.] *Contemporary American philosophy*. Vol. II. New York: Macmillan, 1930. Pp. 447.—The book presents a collection of intellectual autobiographies by eighteen contemporary American philosophers. These essays give the philosophical creeds of the respective authors with the various psychological influences, logical reasons, and human interests which have contributed toward the development of their thought. The essays are titled as follows: From absolutism to experimentalism (Dewey); Logic and

pragmatism (Lewis); Problematic realism (Loewenberg); A temporalistic realism (Lovejoy); A tentative realistic metaphysics (McGilvary); Confessions of an animistic materialist (Montague); Empirical idealism (Parker); Realism in retrospect (Perry); Personal realism (Pratt); Empiricism (Rogers); Brief history of my opinions (Santayana); Realism, naturalism, and humanism (Sellars); Confessio philosophi (Singer, Jr.); Nature and mind (Strong); What I believe (Tufts); Metaphysics and value (Urban); An unborn idealism (Wenley); Confessions (Woodbridge). A list of each author's principal publications is given at the conclusion of each essay.—C. C. Neet (Clark).

4. [Anon.] *Sigmund Freud's 75. Geburtstag*. (The 75th birthday of Sigmund Freud.) *Psychoanal. Bewegung*, 1931, 3, 368-381.—A large number of quotations from newspapers and periodicals on the occasion of Freud's 75th birthday are given, with an analysis of the contents made on the Freudian contributions. These articles come from all lands, showing the wide interest in the Freudian thought.—A. B. Herrig (Michigan Central State Teachers College).

5. Barker, R. G. *The stepping-stone maze: a directly visible space-problem apparatus*. *J. Gen. Psychol.*, 1931, 5, 280-285.—H. Cason (Wisconsin).

6. Barry, H., & Bousfield, W. A. *A heat grill*. *Amer. J. Psychol.*, 1931, 43, 642-643.—Description of a simple heat grill, constructed by having screws projecting up from two wooden plates, which come apart and can be separately heated or cooled. The pain element may be added by inserting phonograph needles between the screws of the upper plate.—D. E. Johanssen (Skidmore).

7. Barry, H., & Bousfield, W. A. *An apparatus for measuring the knee-jerk*. *Amer. J. Psychol.*, 1931, 43, 643-644.—Description of a simple apparatus for applying a blow of uniform intensity to the knee, and for recording the amplitude of the resultant jerk.—D. E. Johanssen (Skidmore).

8. Beasley, W. *An audio-frequency compound alternator with independent control of frequency, intensity and phase*. *J. Gen. Psychol.*, 1931, 5, 415-421.—H. Cason (Wisconsin).

9. Bentley, M. *The work of the division of anthropology and psychology in the National Research Council*. *Amer. J. Psychol.*, 1931, 43, 646-658.—The requests from psychologists for a statement of the work done by the anthropological and psychological division of the National Research Council have induced the chairman to reprint a part of the annual report for the year 1930-1931.

Five general topics are considered: divisional committees, funds administered by the Council, conferences and meetings, researches and investigations originating in, or proposed to, the division, and the relation of the division to its two constituent sciences, to scientific organizations, and to the Council.—D. E. Johansson (Skidmore).

10. Borchardt, L. *Neue Wege zur Erforschung des Leib-Seele-Problem.* (A new method for the study of the mind-body problem.) *Arch. f. d. ges. Psychol.*, 1931, 81, 461-476.—The author is primarily interested in showing how the parallelism between the mental and physical traits of certain of Kretschmer's personality types, particularly the asthenic and the pyknic, may be accounted for. He advances the theory that the mind-body problem is soluble on the basis of neural organization which permits of interactionistic relationships. This being so, the parallelism in Kretschmer's types is between mental and physical processes and not between static mental traits and fixed physical traits.—R. H. Waters (Arkansas).

11. Boynton, P. L. *Proceedings of the meeting of the Southern Society for Philosophy and Psychology, April 19, 1930.* *Psychol. Bull.*, 1931, 28, 325-341.—J. F. Dashiell (North Carolina).

12. Burrow, T. *Physiological behavior-reactions in the individual and in the community.* *Psyche*, 1930, 11, 67-81.—There is the physiology that one looks at and the physiology that one feels. But the physiology that one feels is a vague experience and man does not regard such an attitude as scientific; however, the neurologist deals with the physiology that we feel. The article is an attempt to focus scientific observation upon subjective phenomena, as sensations and reactions occurring within the organism, as they are objectively apparent within the individual and the community.—T. R. Garth (Denver).

13. Burt, H. E. *Inexpensive apparatus for continuous choice reaction.* *J. Gen. Psychol.*, 1931, 5, 286-288.—The apparatus described may be used in "an experimental situation in which the subject performs a choice reaction with two or more telegraph keys to two or more stimuli in such a manner that every correct response presents the next stimulus automatically." The total cost was under \$5.00.—H. Cason (Wisconsin).

14. Carmichael, L. *A new commercial stereoscope.* *Amer. J. Psychol.*, 1931, 43, 644-645.—Description of the method of taking "depthograph" pictures by means of a revolving camera. The stereoscopic effect is produced by viewing the series of pictures (taken on the same film) through a lined screen by transmitted light.—D. E. Johansson (Skidmore).

15. Claparède, Ed. *Point de vue du psychologue et point de vue du sujet.* (The point of view of the psychologist and that of the subject.) *Arch. de psychol.*, 1931, 23, 1-24.—Many of the controversies

in psychology arise from the fact that one does not distinguish sufficiently between the point of view of the psychologist and that of the subject. For example, in the definition of mind we find that the question of extensivity is a question for debate. William James says that voluminosity is a quality common to all sensations, while others say that the mind is non-extensive, non-spatial. This contradiction disappears if the two points of view are distinguished. For the psychologist the mind is evidently non-extensive, since the subject's sensations cannot be localized in space. On the other hand, for the subject the mind is extensive, for it cannot be distinguished from the physical object. The distinction between the psychological and the physical does not arise from the subject's point of view, but solely from the psychologist's. It is said that introspection concerns only the subject, but, on the contrary, introspection is an idea which belongs to the psychologist's point of view. In everyday life, the subject observes only external objects or represented objects which he perceives as external. It is only when the subject assumes the point of view of the psychologist that he introspects. The question of the "stimulus-error" has likewise been in a state of confusion due to a failure to distinguish between these two points of view. For the subject, an estimation of weights, for example, is concerned always with the objects (objects which are external to himself or which are in corporal regions), while for the psychologist the question is one of sensation. The "stimulus-error" is not really an error, but corresponds to a certain attitude, to a certain method of conduct or behavior of the subject. The words "objective" and "subjective" have very often an exactly contradictory significance according to the different points of view. Thus, a hallucination or perception is objective for the subject and subjective for the psychologist. The controversy between *erklärende* and *verstehende* psychology likewise partly arises from a confusion existing between these two points of view.—M. R. Lambercier (Geneva).

16. Collins, J. *The doctor looks at life and death.* New York: Farrar & Rinehart, 1931. Pp. 320. \$3.00.—(Not seen).

17. Eder, M. D. *Vom Guten, Wahren und Schönen.* (Concerning the good, the true and the beautiful.) *Psychoanal. Bewegung*, 1931, 3, 97-112.—The author discourses on the fallacy of regarding psychological principles as anything but generalizations from which individuals vary widely. Psychotherapy and psychotechnics deal with individuals. Due recognition has not been given to the contribution psychology has for the settlement of all problems. The unemployment problem is as much a psychological as an economic one. The author emphasizes the psychological significance of the value of certain characteristics which things hold for man. He recognizes the good, the true and the beautiful as real characteristics as well as size, number, form. He traces the origin of these values, and holds that

since they are created by man to meet his psychological needs, they are also variable. Human nature is unchangeable, but man changes his environment, and this reacts on him, demanding new adjustments.—*A. B. Herrig* (Michigan Central State Teachers College).

18. Elliott, R. M. *Albert Paul Weiss: 1879-1931.* *Amer. J. Psychol.*, 1931, 43, 707-709.—A brief summary of the work of Weiss, and an appreciation of his personality and influence. Weiss died April 3, 1931.—*D. E. Johannsen* (Skidmore).

19. Foradori, E. *Franz Brentanos Lehre von den Axiomen.* (Franz Brentano's doctrine concerning axioms.) *Arch. f. d. ges. Psychol.*, 1931, 81, 179-232.—A treatment of this somewhat unnoticed aspect of Brentano's epistemology.—*R. H. Waters* (Arkansas).

20. Fortes, M. *Psychology or psychologies.* *Psyche*, 1931, 11, 68-73.—Murchison's latest *Psychologies of 1930* must give many a psychologist cause to blush. But the differences are largely in methodology. However, there is prospect of overcoming methodological difficulties. The sound film will offer a means of recording more complete and permanent, which will overcome the difficulties of some types of experiments on which there are differences of opinion. The quantitative technique is much to be preferred to the indefinite descriptive procedure.—*T. R. Garth* (Denver).

21. Garrett, H. E., Bingham, W. V., Angell, J. R., Miles, W. R., Robinson, E. S., Murphy, G., & Woodworth, R. S. *Psychology today.* (Listener's notebook No. 1, Nat. Advisory Council on Radio in Education.) Chicago: Univ. Chicago Press, 1931. Pp. 44. \$0.25.—The listener's notebook was prepared under the direction of Garrett and Bingham. It contains a brief introduction to general psychology by Garrett; information on how to get the most out of a radio lecture; summaries of radio talks by Angell, Miles, Robinson, Murphy and Woodworth; and lists of references. The talks by the above lecturers are, respectively, as follows: *Psychology Today*; *Psychology—A Modern Science of Human Management*; *Learning and Forgetting*; *Our Social Attitudes*; and *Old Prejudices and New Schools of Psychology*.—*N. L. Munn* (Pittsburgh).

22. Geymonat, L. *Il problema della conoscenza nel positivismo. Saggio critico.* (The problem of cognition in positivism. A critical essay.) Turin: Bocca, 1931. Pp. viii+230.—According to the author the necessity of considering the decidedly positivistic problem of cognition again appears today as urgent a matter as that of treating positivism without agnostic or anti-intellectual prejudice. A historical, critical consideration of positivistic gnoseology is proposed in the first part of his work. Then Geymonat offers certain criticisms of contemporaneous evaluations of positivism, which, however, have not affected this philosophical position. In the third part he analyzes a new form of positivistic gnoseol-

ogy, trying to arrive at a new general philosophical conception which would show how the process of cognition is actualized in all the complexities of its various forms.—*V. D'Agostino* (Turin).

23. Guyon, R. *Essai de psychologie matérialiste.* (Essay on materialistic psychology.) Paris: Costes, 1931. Pp. 469.—The author tries to find out in what measure the data of psychology confirm or weaken materialism, and in what measure materialistic psychology is superior to spiritualistic psychology. In four chapters he treats of sensibility as a specific character of living beings, and shows its mechanism and its rôle in unconscious life and in conscious life with the intervention of memory. He then examines the affective states; the will; the value and limits of intelligence, and last, reason and rationalism.—*Math. H. Piéron* (Sorbonne).

24. Hamilton, J. A. *Englisch-Deutsch für Psychologen.* (English-German for psychologists.) Frankfurt: Gaul & Bantelmann, 1931. Pp. 103.—A glossary containing the German equivalents of approximately 2000 English psychological terms, many of which are not included in commonly used dictionaries.—*B. Casper* (Clark).

25. Higginson, G. D. *Fields of psychology; a study of man and his environment.* New York: Hoit, 1931. Pp. 613. \$2.75.—The purpose of the book is to review the more outstanding problems, methods, and materials of several gross divisions of psychology. The point of view is on the whole functional, and emphasis is placed on the biological relations of psychology. "Following an attempt, in the first chapter, to make clear the nature of scientific methods and scientific interrelationships, a brief discussion is given of various ways of studying the psychological organism. In these, no attempt has been made either to exaggerate or to minimize the importance of various points of view in psychology. In Part II, an approach is made to the study of the development of the animal, the race, and the individual, by way of a brief consideration of some fundamental problems of evolution. The more salient features of animal, racial, and individual development are then reviewed. In connection with the topic of individual development, a brief treatment of some problems of socialized behavior is given. In Parts III and IV, the organism is regarded in its more individualized aspects—as a male or a female with a particular racial history. Here, too, the psychological problems of behavior in the school room, the shop, the market place, the court room, the insane asylum, and the clinic are considered."—*H. Cason* (Wisconsin).

26. Ingebrigtsen, B. *Ein neues Audiometer und seine Anwendung bei der neurologischen Untersuchung.* (A new audiometer and its application in neurological research.) *Acta psychiat. et neur.*, 1931, 6, 481-483.—*M. B. Mitchell* (George School, Pa.).

27. Kilpatrick, W. H. *The relation of philosophy to scientific research.* *J. Educ. Res.*, 1931, 24, 97-

114.—In analyzing the relation between philosophy and science the author insists that anyone closing his eyes to his own personal working philosophy is neglecting "a most significant factor at work in his own thinking and conduct." There are two kinds of generalizations the testing of which is the work of science. If the generalization is a simple prophecy, then its verification may be adequately tested, and measurement is an adequate form of testing. The other case is that of a chosen end or aim, "an effectual and final wish in the light of foreseeable consequences." The author believes that in this situation measurement is not in itself adequate. Such testings must be supplemented with an appraisal.—*S. W. Fernberger* (Pennsylvania).

28. King, C. D. A framework for psychology. *Psyche*, 1931, 12, 6-22.—One approaching psychology today seems to be confronted with failure. He is apt to feel that here is no science at all. Psychology needs a framework, because former frameworks are abandoned. The unit response view is recommended as a remedy. This is different from introspectionism and similar in some respects to Gestalt, but refuses to follow the exaggerations of the Gestaltist. It differs from behaviorism in not denying the existence of consciousness. It furnishes a unified theory.—*T. R. Garth* (Denver).

29. Lehman, H. C., & Witty, P. A. Certain attitudes of present-day physicists and psychologists. *Amer. J. Psychol.*, 1931, 43, 664-678.—The writers discuss the changing attitude of physicists with respect to the universality of their laws, and the increasing bewilderment which they feel with respect to the fundamental concepts of their field. Psychologists, on the other hand, frequently shift the burden of explaining basic laws to experts in other fields (physiology, biology, physics, etc.) and show a much greater willingness to claim that there is no mystery in the phenomena in which they are interested. Tables are given showing the percentage of men from different scientific fields who state their religious affiliations in writing biographical sketches for *Who's Who*; physicists and chemists head the list, while biologists, anatomists, and physiologists come at the bottom (smallest percent stating a religious affiliation). When the older and younger men are compared, it is found that the younger ones much more consistently report religious affiliation. It is suggested that the physicist is far from his field of experimentation in dealing with religious matters and is more willing to accept hypotheses which do not appear valid to those more familiar with the human organism and human behavior.—*D. E. Johanssen* (Skidmore).

30. Lewin, K. The conflict between Aristotelian and Galileian modes of thought in contemporary psychology. *J. Gen. Psychol.*, 1931, 5, 141-177.—A description of several differences in the modes of thought which determined the research of the medieval Aristotelians and the post-Galileian physicists. In the discussion of urgent problems in current experimental and theoretical psychology, the author re-

views the developments of the concepts of physics and gives especial attention to the transition from the Aristotelian to the Galileian mode of thought.—*H. Cason* (Wisconsin).

31. Line, W. Three recent attacks on associationism. *J. Gen. Psychol.*, 1931, 5, 495-513.—The author gives a favorable discussion of Spearman and a criticism of Kelley, and argues that modern psychologists are opposed to associationism.—*H. Cason* (Wisconsin).

32. Marston, W. H., King, C. D., & Marston, E. H. Integrative psychology; a study of unit response. New York: Harcourt, Brace, 1931. Pp. 558. \$7.00.—The authors attempt to present general psychology as a unified, organized, subjective, and objective science. The following topics are considered: the integrative psychology of you, elementary unit responses, the hidden machinery, drives, motivation, learning, recall, intelligence, consciousness, sensation, thought-processes, emotion, and personality.—*H. Cason* (Wisconsin).

33. Miles, W. R. Unidirectional mazes for studying human learning. *J. Gen. Psychol.*, 1931, 5, 269-275.—The unidirectional maze described has the following advantages: (1) it can be shown to the subject, (2) it lends itself to the counting method, (3) retracing is automatically eliminated, (4) the turns may be of any desired combination, and (5) it is compact.—*H. Cason* (Wisconsin).

34. Miles, W. R. Unidirectional mazes for use with animals. *J. Gen. Psychol.*, 1931, 5, 275-278.—*H. Cason* (Wisconsin).

35. Miles, W. R. A midway maze for work with animals. *J. Gen. Psychol.*, 1931, 5, 278-280.—*H. Cason* (Wisconsin).

36. Mochi, —. Psychoanalyse, psychophysiologie, et "psychologie concrète." (Psychoanalysis, psychophysics, and concrete psychology.) *Rev. phil.*, 1931, 1-23.—According to the author only those facts which are inexplicable without the hypothesis of consciousness are psychological facts. Consciousness plays in scientific psychology the rôle of only one category. It is for this reason that it exists. Psychology ought to content itself with adapting to the elements of behavior the best hypothesis possible for the purpose of definition and classification and for the establishment of proper relations between variables and functions. A practical and efficient criterion should bring out the distinction between science and speculation. Psychology as a science should serve to give us knowledge about man. In certain cases and with many reservations we may say that psychoanalysis makes us know man better than does any other branch of psychology. To psychoanalysis we owe the discovery and demonstration of the principle of conservation of psychic personality. Psychophysics accepts the originality of psychological facts and aims to demonstrate that every variation of a psychological fact is preceded by a demonstrable modification of a biological fact. Ac-

cording to the author parallelistic psychology and the psychology of the conservation of personality comprise everything scientific that contemporary psychology has produced. The author gives numerous distinctions between what he calls positive psychology, incomplete or abstract psychology, metaphysical or dogmatic psychology, empirical psychology, and concrete psychology. He sees in philosophical psychology the means for the growth of positive psychology.—*M. Ponso* (Turin).

37. Pear, T. H. A further note on euphasia. *Brit. J. Psychol.*, 1931, 21, 427.—A reply to Seashore's and White's criticisms of the suggested term. Further defense of the need for the term.—*M. Drury-Smith* (Cambridge, England).

38. Petri, O. *Univerzo e vita. Genesi e realtà.* (The universe and life. Genesis and reality.) Turin: Bocca, 1929. Pp. 207.—A study of the genesis and behavior of inorganic forces led the author to make a comparison between them and organic forces. The conception which, above all others, offers an explanation of the phenomena of matter is that of natural evolution, for which science is indebted to Darwin and Haeckel. From an analysis of inorganic matter Petri passes to an examination of *Monera*, which manifests the first signs of life. Then he proceeds by degrees to the highest problems of spiritual life, to truth and the ideal. The importance of psychology is shown, apropos of the question of character, through observing that the study of this discipline concerns not only the conduct of man but also all questions and phenomena which make up the history of different peoples and which orient the daily technique of their economic and social life.—*V. D'Agostino* (Turin).

39. Rashevsky, N. Learning as a property of physical systems. *J. Gen. Psychol.*, 1931, 5, 207-229.—The purpose of the paper is to try to fill a gap existing in physics in regard to systems which exhibit phenomena that a biologist would call learning if he found them in living organisms. The author claims that the possibility of the existence of physical systems which exhibit the fundamental properties of learning is deduced by purely logical methods from the kinetic and thermodynamic principles of physics. Some of the properties exhibited in learning, it is said, are deduced from purely thermodynamic considerations based on a geometrical consideration of curves with several minima; and the thermodynamic results thus obtained are also interpreted from a molecular-kinetic point of view.—*H. Cason* (Wisconsin).

40. Reiser, O. L. Physics and the laws of thought. *Psyche*, 1931, 11, 70-78.—The present heretical tendencies observed in physics are due to the facts underlying micro-physics. These show a seeming departure from logic. Modern physics pays little attention to traditional ways of thinking; we must make of our logic a servant, not a master. If we do this we need not give up our logic, but must adapt it to the new order.—*T. R. Garth* (Denver).

41. Reiser, O. L. Evolution, consciousness, and electricity. *Psyche*, 1931, 12, 60-79.—According to the author's view in thinking differentiation (analysis) and integration (synthesis) are complementary, as in biological evolution. The article deals with the subject under the following heads: the origin of life, physical chemistry and life, vitalism and evolution, the problem of integration, empirical laws of biology, chemical regulation and nervous integration, the electrical basis of life, consciousness, oxidation and electrical fields, and Gestalt theory and emergent evolution.—*T. R. Garth* (Denver).

42. Renda, A. *Valori spirituali e realtà.* (Spiritual values and reality.) Messina: Principato, 1931. Pp. 244.—The author considers that contemporary philosophy is oriented in large measure in an ethical direction, and he proposes to study the rightfulness and fruitfulness of this orientation considered as an open problem, not as an accomplished achievement which should be affirmed and ratified. The criticism of the primacy of cognition is subordinated to the same problem, although the second chapter, which contains this discussion, is of considerable length. Besides the question of moral sovereignty as a problem, Renda analyzes the presuppositions of the historical development of rationalism, the anti-intellectual exigency of idealism, and the inadequacy of morality. He considers that psychology has made a conquest of theoreticism, a conquest which has been very difficult and far-reaching. Since psychology reduces to a natural fact, to an existential objectivity, everything which the internal life possesses of spirituality, it is the most insidious of the sciences. All speculative systems which are built on psychology lead to a naturalistic subjectivity. For a further study of the rôle played by psychology as a science, the author refers the reader to a previous work, *Psychological Theory of Values*, Rome, 1920.—*V. D'Agostino* (Turin).

43. Renshaw, S., & Hampton, I. L. A combined chronoscope and interval-timer. *Amer. J. Psychol.*, 1931, 43, 637-638.—Description of an instrument which can be used as a chronoscope or interval-timer, or both. The mean variation of several hundred readings checked against a pendulum make-break contactor was less than .0005 sec., a greater constancy and accuracy, the authors claim, than is obtainable with either the Hipp or the Dunlap chronoscope.—*D. E. Johansson* (Skidmore).

44. Reymert, M. L., & Arnold, H. J. Survey of conditions and facilities for the teaching of psychology in the state of Ohio. *Psychol. Bull.*, 1931, 28, 342-366.—*J. F. Dashiell* (North Carolina).

45. Rugg-Gunn, A. Contact glasses. *Brit. J. Ophth.*, 1931, 15, 549-574.—The firm of Carl Zeiss of Jena is now grinding contact glasses that will correct all cases of ametropia. The contact glass is a thin, transparent, hollow bowl which fits on the anterior part of the eyeball beneath the lids, in contact with the sclera but separated from the cornea by a fluid meniscus (usually 1% saline solution).

- The glass consists of a central, optically effective crown which forms an arc of a sphere (corneal portion), surrounded by an optically ineffective spherical portion (sclerotic). The corneal part may be afocal, in which case correction is due to the fluid meniscus, or the corneal part may be ground into a lens. This glass is so light that it can easily be carried by the eyeball in its movements. The firm of Müller of Wiesbaden manufactures blown contact glasses that can be used to protect the eye and also to correct ametropia. Here there is no fluid meniscus between glass and cornea. With practice, contact glasses can easily be tolerated by the eye all day. Contact glass correction is superior to spectacle correction in that it affords better monocular perspective, binocular fusion, and increased field of vision. By securing uniformity of size of the retinal images in anisometropia, by neutralizing corneal astigmatism, and by permitting a full range of movement of the eyes, contact glasses satisfy almost all of the ocular conditions of binocular vision.—*E. Fehrer* (Bryn Mawr).
46. Scott, T. O. The Hampton Court maze. *J. Genet. Psychol.*, 1931, 39, 287-289.—The pattern of the maze in the Hampton Court Garden is not rectangular, as are the laboratory mazes named after it.—*J. F. Dashiell* (North Carolina).
47. Smith, S. The schools of psychology. *Psychol. Rev.*, 1931, 38, 461-473.—The author objects to introducing distinctions as to psychological schools into the field of experimental psychology. He argues that the only variable which legitimately distinguishes schools of psychology is philosophic belief. But consciousness without objective reference is private and no meaningful language can be used concerning it. Hence, when the introspectionist describes his experiences in terms that give no clue to their objective origin, his words have no interest for objective science. On the other hand, the objective psychologist cannot condemn introspection as long as he uses it as an aid to objective findings. In practice structuralists are objectivists and objectivists are structuralists.—*A. G. Bills* (Chicago).
48. Steichen, A. Eine Anordnung zur Regulierung der Umdrehungsgeschwindigkeiten rotierender Scheiben. (Regulation of speed of rotating discs.) *Zsch. f. Psychol.*, 1928, 59, 1-5.—(*Biol. Abst.* V: 20028).
49. Tinker, M. A. A noiseless exposure apparatus. *Amer. J. Psychol.*, 1931, 43, 640-642.—Description of a device for controlling the illumination of the pre-exposure as well as the exposure field of the Dodge tachistoscope.—*D. E. Johansson* (Skidmore).
50. Travis, L. E., & Hunter, T. A. Tremor frequencies. *J. Gen. Psychol.*, 1931, 5, 255-260.—Description of apparatus for measuring tremor frequencies from 8 to 12, from 40 to 50, and from 100 to 150 tremors per second.—*H. Cason* (Wisconsin).
51. Trimble, O. C. An apparatus for the study of the relative rôles of phase and intensity in sound-localization. *Amer. J. Psychol.*, 1931, 43, 638-640.—Description of an apparatus designed to permit the independent variation of phase and intensity for studies of sound-localization. The phase and intensity can be varied in binaural relation over a frequency-range extending from 125 cycles to 19,000 cycles.—*D. E. Johansson* (Skidmore).
52. Vincent, D. F., & Wolters, A. W. A simple mirror tachistoscope. *Brit. J. Psychol.*, 1931, 22, 67-72.—The writer describes an instrument designed to meet the theoretical requirements of the perfect tachistoscope, since it is constructed without moving parts. He explains that it is a mirror tachistoscope suitable for binocular vision, the mirror being stationary, a switching device of a simple character supplying the alternation of the fixation and exposure fields. The paper is illustrated by five figures showing the construction of the instrument.—*M. Drury-Smith* (Cambridge, England).
53. Warren, H. O. Constructing a technical dictionary. *J. Gen. Psychol.*, 1931, 5, 407-410.—A description of the procedure used and the difficulties encountered in constructing a dictionary of psychological terms.—*H. Cason* (Wisconsin).
54. Weiss, A. P. Solipsism in psychology. *Psychol. Rev.*, 1931, 38, 474-486.—Recognizing that the philosophical problem of reality is as difficult for the behaviorist as for the mentalist, the author discusses the basis of a mentalistic and a physical solipsism. Recent languages have been developed on a non-solipsistic assumption of an external reality. When language is given a purely solipsistic form, the problems of solipsism vanish and all statements about reality become tautological and scientifically futile. The non-solipsistic assumption has a biological basis in the necessity for survival in the struggle for existence. The psychologist regards all conceptions of fundamental realities as products of the linguistic interaction between individuals. Such fundamental realities as electrons, atoms, sensations and affections are social products of interaction. None can be regarded as present at birth. Hence the development of any particular type of fundamental reality is the product of an environment and the ontogenetic and phylogenetic history of the organism.—*A. G. Bills* (Chicago).
55. Williams, H. M. Experimental studies in the use of the tonoscope. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 266-327.—An account of experiments designed to standardize procedure in tests of vocal control of pitch; it is offered as a technical supplement to Seashore's manual for the use of the tonoscope. It contains (1) a description of Model VI of the tonoscope, (2) a report of critical and experimental investigations of the technique for testing pitch control of the voice, and (3) a description of tests for the measurement of pitch control.—*F. A. C. Perrin* (Texas).

[See also abstracts 95, 154, 211, 251.]

SENSATION AND PERCEPTION

56. Ames, A., Jr., & Glidden, G. H. Ocular measurements. *Trans. Sect. Ophth. Amer. Med. Assn.*, 1928, 1-68.—(*Biol. Abst.* V: 20018).

57. Banister, H., & Blackburn, J. M. An eye factor affecting efficiency at ball games. *Brit. J. Psychol.*, 1931, 21, 382-384.—The experimenters measured the inter-pupillary distances of 258 Cambridge undergraduates and compared the measurements with their efficiency at ball games. Those with the greater distance between the pupils were on the whole the better players, probably because of the better stereoscopic vision which the greater width makes possible.—*M. Drury-Smith* (Cambridge, England).

58. Beasley, W. Differential responses to cyclic phase variations in compound sounds. *J. Gen. Psychol.*, 1931, 5, 329-351.—The conclusions drawn by former investigators on the effect of phase on tone quality are ambiguous. The only audible components in the compound used can be represented by the ratio terms 1:2:3:4. 2 and 3 are for major fundamentals, 1 for weak differential tone, and 4 for weak first harmonic of 2. Apparatus was employed which permitted continuous change of phase between the fundamentals, with independent control of intensity and frequency. The cyclic rate of phase change was indicated by automatic recorders on a polygraph record. Observations under continuous phase retardation of fundamental 3 showed that each component of the clang varied in loudness, but at different times, and sometimes at different rates. The total pattern of variations was too complex to be analyzed directly. A method was therefore devised for obtaining an objective analysis of the variations in each of the components of the clang by means of 16 observers, in four groups of four members each. Each group was practiced in reacting to variations in a specific component of the clang. A synthetic graph was devised, showing (1) rates, (2) directions, and (3) components associated with the discriminations each set of observers made. For each cyclic phase shift, the components 3, 2, and 1 varied once in loudness, and the component 4 varied twice. The direction of changes in 3 and 1 was synchronous, but those in 2 were opposite. The component 4 attained maximum loudness simultaneously with a maximum of 3 and 1, and a minimum of 2; also, since 4 changed twice as rapidly as the other three components, it attained a maximum again simultaneously with a minimum of 3 and 1, and a maximum of 2. Phase gave a real basis for the discriminations listed, but the direct stimulus change discriminated was a periodic change in the instantaneous pressure value of the compound wave. This was discriminated as a variation in the relative loudness (or pitch?) of the components in the compound. The results were not in accord with a strict resonance-analysis function as traditionally postulated.—*H. Cason* (Wisconsin).

59. Bourdon, B. Le cinématographe et la persistance des impressions lumineuses. (The cinema and the persistence of light impressions.) *J. de psychol.*, 1931, 28, 470-472.—The author points out the inadequacy of an explanation of visual movement on the basis of the persistence of light impressions alone. A certain amount of persistence is a necessary condition, but it is not sufficient to explain the phenomenon. The illusion of movement "is manifest at the moment when the two points of light are seen simultaneously, the first stimulus having remained visible in spite of its disparity, due to the persistence of the light impression produced by it." A number of experimental demonstrations are discussed.—*N. L. Munn* (Pittsburgh).

60. Bressler, J. Illusion in the case of subliminal visual stimulation. *J. Gen. Psychol.*, 1931, 5, 244-251.—A study of the Müller-Lyer illusion in which the subject's responses were influenced by arrows so faint that they could not be consciously seen. Two sets of imperceptible arrows which differed in strength were used, and in judging which of the two lines was the longer the magnitude of the response varied directly with the strength of the subliminal stimulus.—*H. Cason* (Wisconsin).

61. Cattell, R. B. The subjective character of cognition and the pre-sensational development of perception. *Brit. J. Psychol., Monog. Supp.*, 1930, 14. Pp. 166.—The work described in this monograph was undertaken in order to solve certain problems raised in Spearman's *Principles of Cognition*. The monograph gives a very full account of the writer's experimental methods, their results, and the significance which he feels these have for psychological problems in general. The work is divided into eight chapters and is furnished with many tables and figures; most of the chapters are supplied with a summary. The evidence is grouped together in a long final summary under five heads: (1) the nature of secondary pathemic experience; (2) the conditions of secondary pathemic experience; (3) the nature of pre-sensation; (4) the conditions of pre-sensation; (5) the relation of pre-sensation to secondary pathema. The following are some of the conclusions reached: (1) the normal perception of stimuli as objective tends under certain conditions to undergo modification, the stimulus sensations being no longer experienced as over against the self, but fused with the subjective side of consciousness, and constituting the self; consciousness being filled with the "sensation," the duality disappears. In addition to the degrees of experience possible between these two extremes, there is a "background" experience not classifiable as intermediate, because in it the subjectivated sensations form part of the subjective background of a still dual consciousness. In complete pathema the sensation attributes of extension and duration are lost, sensation and affect fuse, the intensity of the pathemic (affect) consciousness being usually lower than that of the sensation (percept) from which it is derived. If affect of any kind

accompanies the experience in the percept stage, it usually increases in intensity on pathemization. Profound pathemic experience was found to be almost unretrospectable. (2) The most powerful cause of pathemic experience was passivity, the relinquishing of all conative activity, though distraction of the attention from the stimulus seemed to be about as effective. The experiencing of strong affect tends to cause pathemic experience of any stimulus perceived at the same time. (3) It was found that in the moment preceding the (objective) perception of any stimulus there occurred a purely subjective, pathemic experience which varied a little in character and duration according to the nature of the stimulus and the mental condition of the subject in the moment before stimulation; the experience was mainly of a conative-affective quality, showing nothing of the modality quality of the sensation; the pre-sensation was subject to three modifications. (4) The order of effective factors in producing pre-sensation was passivity, inappereceptibility, intensity of stimulus, distraction; the psychogalvanic records seemed to show that it occurred more frequently when the conative responses of the subject were comparatively late. (5) Pre-sensation and secondary pathema have no close functional relation; pre-sensation was found to be a predominantly orectic (conative-affective) experience, transient and with many phases. In secondary pathema conation was absent so far as the sensation was concerned; it was comparatively stable and mainly affective in character.—*M. Drury-Smith* (Cambridge, England).

62. Outler, T. H. Visual size and distance. *Amer. J. Psychol.*, 1931, 43, 621-623.—The problem was to determine the functional relation of apparent size to distance. The method of constant stimuli was used with two stimulus objects—a square and a "hand" (pen-and-ink drawing), of 14 different sizes. Under the conditions of the experiment it was found that at 50 inches distance, a 6-inch stimulus object is the equal in size of a 9-inch object at 100 inches of distance, i.e., the objective size must be increased about 1.5 times in order to produce the same apparent size. The results showed no difference for the apparent change in size for the two stimulus objects, although the one was much more "objectified" than the other. It is pointed out that the experiment should be repeated with still more "objectified" stimuli before this conclusion can be incontrovertibly accepted.—*D. E. Johanssen* (Skidmore).

63. Dahmen, O. Die steigende Wirkung von Recresal auf die optische Auffassung. (The augmenting effect of recresal on visual apprehension.) *Indus. Psychotechn.*, 1930, 7, 271-278.—Six subjects were tested for visual apprehension by means of a tachistoscope. They were given three practice days, then a control day, a recresal day, a control day, and a final recresal day. Individual curves are shown, from which the author concludes that the recresal does produce a diminution in errors in the test.—*A. W. Kornhauser* (Chicago).

64. Donahue, W. T., & Griffiths, C. H. The influence of complexity on the fluctuations of the illusions of reversible perspective. *Amer. J. Psychol.*, 1931, 43, 613-617.—Using 8 well-known figures of the reversible perspective type, the authors studied the rate of fluctuation with respect to the complexity of the figures. They conclude that the greater the complexity of the figure the slower the rate of change, but that this factor is not the most important. The most important factor is found to be the familiarity of S with the figure, and with the two possible interpretations of the figure. The more familiar the figure, the more rapid the rate of fluctuation, unless there was an unequal familiarity with the two interpretations of the figure. The authors believe that the rate of change is proportional to the definiteness of the ideas involved in the two interpretations.—*D. E. Johanssen* (Skidmore).

65. Drever, J. In what sense can we speak of primary colours? *Brit. J. Psychol.*, 1931, 21, 360-367.—The problem discussed is whether we really have a scientific and ultimate basis for the classification of the colors in the primaries of the physicist, and the difficulties and apparent inconsistencies with verifiable facts which are involved in the physicists' claim are shown. It suggests that there is a still more fundamental point of view. He proposes that since psychologists and physiologists more or less admit that there are four fundamental colors, but are unable in respect of two out of the admitted four to agree, the use of the term *primary* should be abandoned altogether, except possibly in the artistic sense, and be replaced by the two terms "physiologically stable" and "psychologically simple," four colors being recognized in both cases. Psychologically there are undoubtedly four "primary" colors; the physiologist, on the other hand, has good grounds for maintaining that there are only two.—*M. Drury-Smith* (Cambridge, England).

66. Engel, S. Störungen des Gesichtsfeldes. (Disturbances of the visual field.) *Fortsch. d. Neur., Psychiat. u. Grenzgeb.*, 1931, 3, 388-405.—After sketching the methods of testing the visual fields, the author takes up the changes in them caused by disturbances of the optic tract between the chiasma and the visual cortex. A part of the discussion is concerned with hallucinations occurring in connection with hemianopsia and due to a lesion in the optic tract. They are comparatively rare, and the patient usually recognizes their unreality. They are of value in localization insofar as they often occur in the defective section of the visual field. They may direct attention to a hemianopsia which would otherwise be overlooked, and they may occur before the defect can be demonstrated; or they may accompany a transient hemianopsia which remains unobserved. There appears to be no difference in the character of the hallucinations accompanying lesions of the central and the peripheral parts of the tract; in both there are photopsias and formed images. Vision is

unaffected, and the images do not appear in half-form.—M. E. Morse (Catonsville, Md.).

67. Erschowitz, N. Ein Beitrag zur Frage der Beziehung zwischen Augenmass und Intelligenz. (A contribution to the question of the relationship between eyesight and intelligence.) *Indus. Psychotechn.*, 1930, 7, 264-270.—Five feeble-minded children were given a series of intelligence tests and tests of vision. Considerable agreement was found between the two series of tests. The conclusion is reached that the testing of eyesight is increasingly difficult (approaching the impossible) with individuals of lower and lower intelligence. At the other extreme, cases are cited to show how intelligent subjects sometimes invalidate visual test results by making allowances for known visual defects, etc.—A. W. Kornhauser (Chicago).

68. Farnsworth, P. R., & Poynter, W. F. A case of unusual ability in simultaneous tapping in two different tones. *Amer. J. Psychol.*, 1931, 43, 633.—Report of a test of the ability of Arthur Hardestie (modernistic composer and performer) to tap complicated rhythms, where the tapping with the left hand is considerably different from that being done simultaneously with the right.—D. E. Johanssen (Skidmore).

69. Fernberger, S. W. On absolute and relative judgments in lifted weight experiments. *Amer. J. Psychol.*, 1931, 43, 560-578.—Naïve subjects were used in a lifted weight experiment in which a series of absolute judgments ("light," "intermediate," or "heavy") was followed by an ordinary series with a comparison weight. Although the "absolute" series judgments are less precise, they show normal curves of the psychometric functions as the basis of the calculation of limens; the intervals of uncertainty are greater for the "absolute" series, also. It is suggested that the progressive practice effect which appears is largely an increasingly adequate definition of the categories of judgment—a definition of categories which can be carried over to the "relative" judgments from the "absolute" judgments, although not entirely without change, as evidenced by the fact that the practice effect still appears in the "relative" series after a training of 1750 judgments on the "absolute" series.—D. E. Johanssen (Skidmore).

70. Ferree, C. E., & Rand, G. Distance of projection of the visual image in relation to its apparent intensity. *Amer. J. Psychol.*, 1931, 43, 678-684.—Summary of some of the work done on the effect of the distance of the stimulus upon the intensity seen, in answer to a criticism of Ferree and Rand's work by Freeman. Criticism of certain points of Freeman's experiment.—D. E. Johanssen (Skidmore).

71. Frey, M. v. Wie entstehen Temperaturempfindungen? (How do temperature sensations arise?) *Verh. Physikal.-Med. Ges. Würzburg*, 1930, 55, 109-115.—(*Biol. Abst.* V: 20019).

72. Frey, M. v., Ott, P., & Schriever, H. Wie kommen Temperaturempfindungen zustande? (How do temperature sensations come into existence?) *Zsch. f. Biol.*, 1930, 90, 161-166.—(*Biol. Abst.* V: 20019).

73. Fry, G. A. The stimulus correlate of bulky color. *Amer. J. Psychol.*, 1931, 43, 618-620.—It is found that a discrepancy between the physical and phenomenal distribution of intensity is an adequate stimulus for arousing the sensation of a bulky color. The equation for the curve which outlines a figure on a disc (black and white, in the example given) is $p = \log(360^\circ - \theta)/a$. Where $a = 1$, the distribution of intensity is practically uniform, producing a surface color; but where there is an unequal distribution of intensity (tested for $a = 240^\circ, 90^\circ, 60^\circ, 36^\circ, 20^\circ, 7.5^\circ$) a bulky color is produced, and the greater the discrepancy between the physical and the phenomenal distributions of intensity the more flimsy and insubstantial the color.—D. E. Johanssen (Skidmore).

74. Fry, G. A. The relation of border-contrast to the distinctness of vision. *Psychol. Rev.*, 1931, 38, 542-549.—Why do visual percepts appear sharply defined in spite of the irradiation of light and chromatic and spherical aberration? Myers' explanation in terms of "border-contrast" was tested by determining whether a graded stimulus can yield a visual image with a distinct border. The results corroborate Myers' contention. The physiological processes underlying border-contrast are discussed in relation to the Hering theory and the McDougall drainage theory.—A. G. Bills (Chicago).

75. Geldard, F. A. Brightness contrast and Heyman's law. *J. Gen. Psychol.*, 1931, 5, 191-206.—Simple contrast thresholds of the retina were determined without peripheral stimulation and with varying intensive degrees of such stimulation. The results show that Heyman's law is an artifact of faulty treatment of experimental findings. The claim that former experiments substantiating the law have demonstrated the presence of "central inhibition" is particularly repudiated. The results were confirmed by a further study in which similar thresholds were obtained under conditions of pupillary control.—H. Cason (Wisconsin).

76. Graham, C. H. An investigation of binocular summation: II. The periphery. *J. Gen. Psychol.*, 1931, 5, 311-328.—The theoretical implications of the problem of binocular summation are discussed. An experimental study showed that there is no summation under conditions of peripheral retinal stimulation when the stimulated area is relatively small. No evidence in favor of a summation effect was found when the stimulating conditions of Piper's experiment were reproduced. In all cases the monocular thresholds were as low as the binocular thresholds.—H. Cason (Wisconsin).

77. Graham, C. H., & Granit, R. Comparative studies on the peripheral and central retina. VI.

Inhibition, summation and synchronization of impulses in the retina. *Amer. J. Physiol.*, 1931, 98, 664-673.—An apparatus has been constructed in which two beams of light led to two adjacent semi-circular test patches could be varied independently with regard to either intensity or flicker. It was found that when the two semi-circles were of equal brightness and flickering synchronously, they gave a higher fusion frequency than when taken singly. When only one beam was flickered and the other adjusted to give the same brightness as the flickered patch when fused in the presence of the steadily illuminated semi-circle the fusion frequency of the flickering semi-circle was raised. The authors concluded that the synchronization of impulse favors inter-action over lateral channels, and that probably the whole process involves a true spatial summation. When the two semi-circles were at different levels of brightness, the fusion frequency of the darker is unaltered or lowered by the presence of the brighter, whereas the fusion frequency of the brighter is increased by the presence of the darker, provided the difference between them is not too great. The removal of the summation of the darker was attributed to inhibition, since the results obtained with the brighter showed that summation was bound to appear unless actively inhibited. By showing that when two adjacent areas are at different levels of brightness, the brightness difference is exaggerated by the specific maximum, which may well be a retinal form of contrast, the results explain how it is possible at high intensities to retain visual acuity and the faculty of discriminating brightness in spite of the increased summation over lateral channels. The inhibition is well developed in the fovea. No evidence of inhibition at high intensities in the periphery was obtained.—C. Landis (N. Y. Psychiatric Institute).

78. Graham, C. H., & Hunter, W. S. Thresholds of illumination for the visual discrimination of direction of movement and for the discrimination of discreteness. *J. Gen. Psychol.*, 1931, 5, 178-190.—"An apparatus, patterned after that used by Hecht and Wolf with bees, was used with human subjects in order to determine the thresholds of illumination necessary for the discrimination of direction of movement and for the discrimination of direction of lines. The results show a marked difference in the illuminations required for the two responses. At the highest reciprocal of the visual angle tested, only about one-thousandth of the illumination required for the movement discrimination is needed for that under stationary conditions. It is suggested that the movement situation elicits a temporally controlled response while the stationary situation elicits a spatially controlled response. In discussing the experiment by Hecht and Wolf on the visual acuity of the honey bee, the authors point out that the bees were discriminating on the basis of direction of movement rather than on the basis of the discreteness of stationary visual stimuli which is the typical acuity situation."—H. Cason (Wisconsin).

79. Granit, R., & Davis, W. A. Comparative studies on the peripheral and central retina. IV. Temporal summation of subliminal visual stimuli of the time course of the excitatory after-effect. *Amer. J. Physiol.*, 1931, 98, 644-653.—"A flash of light lasting for 0.0113 second is adjusted to a strength just below the absolute threshold of vision. When this flash is followed by a second subliminal of still shorter duration, it was found that the second flash sums with the after-effect of the first to give a visible effect. The shorter the interval between flashes, the smaller the quantity (intensity \times duration) with which the second subliminal is capable of raising the after-effect of the first to threshold value. By measuring this quantity at various intervals between the flashes, it has been possible to determine the level of the subliminal excitatory remainder as a function of time."—C. Landis (N. Y. Psychiatric Institute).

80. Granit, R., & Hammond, E. L. Comparative studies on the peripheral and central retina. V. The sensation-time curve and the time course of the fusion frequency of intermittent stimulation. *Amer. J. Physiol.*, 1931, 98, 654-663.—In central and peripheral vision with a 1° and a 3° area the development of fusion frequency as a function of time of exposure was studied. It was shown that the fusion frequency increases first rapidly, then slowly with the time of exposure. The higher the intensity the steeper the rise and the longer the time to the maximum. A curve showing the development of the sensation of brightness has been obtained under conditions identical with those used in measuring the time course of the critical frequency. An analysis of the results shows that the two functions are different in spite of the fact that the flicker phenomenon is an index of brightness.—C. Landis (N. Y. Psychiatric Institute).

81. Guilford, J. P., & Park, D. G. The effect of interpolated weights upon comparative judgments. *Amer. J. Psychol.*, 1931, 43, 589-599.—"A heavier and a lighter weight were interpolated between a standard and its comparison weights with two distinct results: (a) they enlarged the differential limen, making discrimination poorer; (b) they shifted the psychological values of the variable weights relative to the standard. A heavy interpolated weight tended to decrease the impressions of the variable weights and a light interpolated weight tended to increase them. But all variable weights were not affected to the same degree nor in the same direction by the same interpolated weight. A method was introduced by which the dynamic interrelation of lifted weights may be studied under different variations of conditions. Evidence both objective and subjective favors the Gestalt theory of the comparative judgment."—D. E. Johanssen (Skidmore).

82. Hauge, I. B. An investigation of the phenomena connected with the beating complex. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 32-73.—Descriptions of the beating

complex were secured from observers (1) when the primary tones were at minimal, medium, and maximal intensities, (2) when the primaries differed in frequency, (3) when the primaries were reduced from maximal to minimal degrees and increased from minimal to maximal degrees, and (4) when the intensities were increased and decreased simultaneously; additional descriptions furnished data concerning pitch variations in the beat, and related phenomena. Audio-oscillators, electrically-driven tuning forks, and Stern variators were used to produce the tones. It was found, among other results, that during the increase of one primary and the decrease of the other, a single tone with a faint beat was heard; the pitch of this tone changed gradually in the direction of the primary tone and its beat became more prominent; and when it became most prominent, the tone had a less definite pitch. In general, the results indicate that the quality of the beat depends upon both the relative and the absolute intensities of primaries.—F. A. C. Perrin (Texas).

83. Helson, H. The cigarette "illusion": a case of color transformation. *Amer. J. Psychol.*, 1931, 43, 691-700.—Answer to Wells' criticism and a substantiation of Newman's attack upon her criticism (*Amer. J. Psychol.*, 1931, 43, 136-139; 506-508).—D. E. Johannsen (Skidmore).

84. Henning, M. P. Einige Worte über den Schwedischen Verein "För Dövas Vål" (zum Wohl der Schwerhörigen). (A few words on the Swedish association "För Dövas Vål" (for the benefit of the deaf).) *Acta Oto-Laryngol.*, 1931, 16, 369-373.—A brief sketch is given of the work of the Swedish Association for the Benefit of the Deaf during the past ten years. It includes stimulating the improvement of apparatus for hearing and making it known through the quarterly publications, and the establishment of schools for the deaf and dumb.—M. B. Mitchell (George School, Pa.).

85. Hogben, L. The biological analysis of sensation. *Psyche*, 1931, 11, 26-47.—It has been necessary during the past generation for biologists to seek to purge their subject of terminology having introspective associations. The biologist is concerned with what may be publicly demonstrated, not what may be felt by the animal studied. Russell has facetiously remarked that the behavior of animals "partakes of the national character of the investigator." The article undertakes to show how introspective concepts have been eliminated from biological discussion of the sense organs by experimental inquiry.—T. R. Garth (Denver).

86. Jessen, J. Les résultats de l'opération radicale de l'oreille moyenne. (The results of radical operation on the middle ear.) *Acta Oto-Laryngol.*, 1931, 16, 459-474.—The results of radical operations on the middle ear are given for 198 patients. Tables and discussions of the results are given under three classifications: subjective (depression, vertigo, and headaches), surgical (complete healing), and func-

tional (auditory acuity). On the whole, the results were much better than had been expected. While some complained of being worse after the operation, this was usually accompanied by a generally poor physical condition.—M. B. Mitchell (George School, Pa.).

87. Klingler, G. Die Herstellung der Mindestzeit zwischen zwei Handlungen bei vorgeschriebener Reihenfolge. (The determination of the least time interval between two movements of a pre-described series.) *Arch. f. d. ges. Psychol.*, 1931, 82, 105-152.—The general reaction time problem belongs, systematically, in the field of psychophysics. The general problem includes not only the traditional reaction time studies but also the problem of anticipatory synchronous registration of movement with the dial of a clockwork; of the complication experiment; and also of the time interval between two voluntary movements. The present study deals with this last question. This problem has its analogy in the determination of the least time interval between two sensory impressions. The specific problem was the time interval between the most rapid successive movements of the two hands. Two methods of measuring the interval were employed: the condensor-method, which depends upon the rate of charging of a condenser, and a kymographic set-up. In the latter case a number of combinations of movements were used; in any case the right or left hand might be moved first, but here the one might be moved in one direction, the other hand in another. The average time interval for the two methods, respectively, is 26.5 sigma and 29.0 sigma. Results indicate that the interval is shorter when the preferred hand is moved first; that there is no significant difference when the two hands move in different directions; that the difference between the two methods is intrinsic to the two types of apparatus employed.—R. H. Waters (Arkansas).

88. Koch, H., & Renqvist, Y. Spannungsempfindung ohne Hautprickeln bei Wechselstromreizung. (Tension-sensation without tickling by means of stimulation with alternating current.) *Skand. Arch. Physiol.*, 1930, 59, 266-278.—(*Biol. Abst. V*: 20024).

89. Krakov, S. W. Über eine zentrale Beeinflussung der Sehschärfe. (A central influence on visual acuity.) *Graefes Arch. f. Ophth.*, 1930, 124, 76-86.—(*Biol. Abst. V*: 20025).

90. Kreezer, G. A neglected possibility in frequency theories of hearing. *Amer. J. Psychol.*, 1931, 43, 659-664.—A suggested theory for audition, which accounts for both intensity and pitch on the basis of frequencies of neural impulses, the former being of a different order of magnitude from the latter. It is suggested that the units in the nerve-response which are re-occurring at audio-frequencies are possibly groups composed of impulses occurring at still greater frequencies; this would furnish an acceptable neural correlate for intensity-steps in auditory experience.—D. E. Johannsen (Skidmore).

91. Langenheck, B. Experimentelles und Theoretisches zur Frage der Hörschwellenbestimmung. (Experimental and theoretical facts on the question of auditory threshold determination.) *Pflüg. Arch. f. d. ges. Physiol.*, 1930-31, 226, 11-46.—The author here compares the accuracy of determining the auditory threshold by Wiener's auditory field method and the audiometer method used in America. Large discrepancies were found between the results, and these were explained on the ground that the American experimenters have used a hard ear model to measure the sound impulse, and the human ear is softer and more yielding.—D. S. Oberlin (Bryn Mawr).
92. Leiri, F. Über die Leitung der ultramuskulischen Töne in das innere Ohr. (On the conduction of ultramusical tones into the inner ear.) *Acta Oto-Laryngol.*, 1931, 16, 362-368.—Ultra-musical tones are conducted into the inner ear by way of the thin membrane of the round window. Bibliography.—M. B. Mitchell (George School, Pa.).
93. Leiri, F. Über die Schwellenintensität bei der Perception der ultramuskulischen Töne. (On the threshold intensity in the perception of ultramusical tones.) *Acta Oto-Laryngol.*, 1931, 16, 374-384.—Bibliography.—M. B. Mitchell (George School, Pa.).
94. Mathiesen, A. Apparent movement in auditory perception. *Psychol. Monog.*, 1931, 41, No. 4.—*Univ. Iowa Stud. Psychol.*, No. 14, 74-131.—Using a laboratory set-up consisting of a Victrola motor, a timing and click-producing unit, a signalling and reporting unit, and accessories, the investigator controlled such factors as illumination, the distance apart of the receivers, and the training of the observers, in an effort to obtain compulsory conditions for apparent auditory movement, corresponding to the visual phi-phenomenon. No compulsory conditions were found; in fact, auditory movements were reported in only 4% of the 6,000 trials. The filling-in between the two auditory stimuli was accomplished primarily by visualization. The range of intervals within which movements were reported did not correspond closely with the range of phenomenal shortening of the distance. So far as positive indications are concerned, conditions of dichotic audition seemed most favorable for the phenomenon.—F. A. C. Perrin (Texas).
95. Morgan, C. L. A psychological approach to space-time. *Mind*, 1931, 40, 409-423.—A philosophic discussion of the perception of space and time or space-time. The perception of space-time involves activity above mere sentience (or sensation), possibly reflection. "If this totality (the perception of space-time) has new qualities which its constituents, taken severally, do not possess; and if, within this totality, there are specialized qualities which are themselves new; one may believe that in the growth of perception there is acquired that new quality which one may name 'spatio-temporality.'" The author harks back to the Berkeleyan view that pure vision does not give the third dimension of space or "outness."—H. Helson (Bryn Mawr).
96. Newton, I. Opticks, or, A treatise of the reflections, refractions, inflections and colours of light. (Repr. from the 4th ed. Foreword by Albert Einstein. Intro. by E. T. Whittaker.) New York: Whittlesey House, McGraw-Hill, 1931. Pp. 442. \$2.50.—(Not seen).
97. Pasternak, J. Ein Beitrag zur Lehre von den akustischen Intermittenzerscheinungen. (A contribution to the theory of acoustic intermittence phenomena.) *Arch. f. d. ges. Psychol.*, 1931, 81, 1-48.—In a series of experiments the author determines the frequency with which a tone is being interrupted by a perforated disk at the moment it is subjectively reported to blend or be continuous. The interrupted tone is then photographically registered. A study of the latter leads to the conclusion that interruption phenomena rests upon a physical, and not a physiological, basis. A bibliography of 35 titles is given.—R. H. Waters (Arkansas).
98. Purdy, D. McL. Spectral hue as a function of intensity. *Amer. J. Psychol.*, 1931, 43, 541-559.—The present study reports an investigation of the Bezold-Brücke phenomenon in a number of different aspects. The method was to match the hue of a weak stimulus with that of an intense stimulus by changing the wave-length of the latter. It was found that there are three wave-lengths in the spectrum with hues which do not vary with changing intensity, viz., 571, 506, and 474 m μ respectively. By mixing red and blue it was possible to make a similar determination for the purples, and the shift in this case is toward an increasing reddishness, but a certain mixture can be found which does not shift with changing intensity. The spectral *Urfarben* were found to lie at about 576, 504, and 476 m μ respectively, but the extra-spectral invariable was found to be a purplish red and not an *Urfarbe*. When the spectral colors were diluted with white light, the changes which occurred were different from those occurring under the reduced intensity. It is impossible to fit these facts into either the Helmholtz or the Hering theory of color vision, but the author emphasizes the fact that they are of fundamental significance for theory, and should be carefully considered.—D. E. Johanssen (Skidmore).
99. Rey, H. Synchrone Registrierungen eines antizipierten Durchganges nach disjunktiver Einstellung auf mehrere Eventualitäten. (Synchronous registration of an anticipated event after separate adjustment to several possibilities.) *Arch. f. d. ges. Psychol.*, 1931, 81, 385-400.—An experimental study of the time relations involved in the making of a prescribed movement simultaneously with the passage of a marker across a designated point on a dial. Numerous data are given on the amount of error involved when the signal to react was given with the dial in various positions and for different speeds of the dial. The amount of error for each of the ten reacting fingers is also considered. The experiment

was largely a demonstration of the reality of a tendency toward anticipation (Wirth's *Synchronisierung*).—R. H. Waters (Arkansas).

100. Ruckmick, C. A. A "central" explanation of sound localization. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 132-141.—At least three sets of conditions must be taken into account in problems concerned with sound localization; namely, conditions of stimulation, the "neurological substratum," and such psychological factors as past experience, training, *Aufgabe*, and attention. The psychological factors, "while best induced by certain physical conditions, cannot be referred entirely to any sensory process, but had better be explained in terms of neurological conditions in the cortex and underlying platforms as traces of past experience in the individual and in the race which interpret the present perceptual occurrence."—F. A. C. Perrin (Texas).

101. Schwarz, G. Über konzentrische Gesichtsfeldeinsengung bei psychisch Normalen. (Concerning the concentric narrowing of the visual field in the mentally normal.) *Neue Psychol. Stud.*, 1930, 6, 131-251.—The Aubert-Förster phenomenon depends not only on the sharpness of vision but also on all the recognition processes in indirect vision, and thus also on the initial noting of the centripetally approaching object, the first discrimination between dark and light, the first perception of parts and of configurational distinctions. There is thus a normal concentric narrowing of the visual field, whose pathological enlargement is the "pipe-shaped visual field" in the case of nerve disturbances. In the configurational-genetic primitive act, for example discriminating light from dark (in the case of a few subjects and in a light room, however) in gradations of 44 cm. to 4.4 m. depth-distance, a narrowing of 76% was found, while in contrast to this for contour recognition in a depth of 4.4 m. there was present only 45% of the near field. The improvement with depth is in the beginning quicker, and later slower; the temporal is stronger than the nasal, and the vertical stronger than the horizontal, so that the form of the entire field is altered with the depth. The depth was always known to the subject. Totality in psychological states was worked out in particular, as was also the biological usefulness.—W. Wirth (Leipzig).

102. Thouless, R. H. Phenomenal regression to the real object. I. *Brit. J. Psychol.*, 1931, 21, 339-359.—Experiments performed on the shapes of objects viewed obliquely, the apparent brightness of differently illuminated surfaces of different reflectivity, the apparent sizes of objects at different distances, and the apparent convergence of parallel lines receding from the observer, showed that what the subject saw in each case was intermediate between what was given in peripheral stimulation and the "real" character of the object. The term "phenomenal regression to the real object" was given to this effect of the character of the "real" object on

the phenomenal character. The index $(\log P - \log S) / (\log R - \log S)$, was used as a measure of this effect, P being the numerical measure of the phenomenal character, R of the "real" character and S of the stimulus character.—M. Drury-Smith (Cambridge, England).

103. Thouless, R. H. Phenomenal regression to the real object. II. *Brit. J. Psychol.*, 1931, 22, 1-30.—In Part I of this paper, which appeared in the April number of the same journal, it was suggested that "'memory colours,' the tendency to constancy of size, and a similar tendency of perceived shapes, could be regarded as examples of a general tendency in perception for phenomenal characters to be intermediate between the characters indicated by retinal stimulation and the 'real' character of the perceived object." The possibility remained that what determined the influence of the "real" on the phenomenal character was previous knowledge of the real character, or present perceptual indications of the real character, or a combination of both these factors. This paper describes a series of experiments the aim of which was to elucidate this point. The experiments were made on brightness, shape, the perceived upright, the size-weight effect, and equal-appearing intervals. It was found that phenomenal regression was not dependent on, e.g., previous knowledge of the actual shape of the object looked at, but only on the presence of indications given in perception of what this shape was. After-sensations were not influenced by phenomenal regression at the time of fixation, but depended on the stimulus character of the objects observed. Phenomenal regression tended to reduce apparent simultaneous induction effects. It is suggested that the size-weight illusion is an example of a general principle of phenomenal compromise, which may also explain experimental divergences from the difference law in experiments on equal-appearing intervals. A response hypothesis of perception is indicated, and some necessary consequent modifications in the theory of the teaching of drawing are discussed.—M. Drury-Smith (Cambridge, England).

104. Vogel, K. Zur Bewertung der Ergebnisse der calorischen Reaktion, insbesondere bei Ménièreschen Erkrankung. (The evolution of the results of the caloric reaction, especially in Ménière's disease.) *Zsch. f. Ohrenhk.*, 1929, 23, 39-54.—(*Biol. Abst.* V: 20030).

105. Wells, E. F. The "cigarette illusion": a reply to Mr. Newman. *Amer. J. Psychol.*, 1931, 43, 686-691.—Answers to the 9 objections raised by Newman (*Amer. J. Psychol.*, 1931, 43, 506-508) to Wells' earlier criticism of Helson's "cigarette illusion" (*Amer. J. Psychol.*, 1931, 43, 136-139).—D. E. Johansson (Skidmore).

106. Wells, E. F. A rejoinder. *Amer. J. Psychol.*, 1931, 43, 700-706.—On the cigarette illusion.—D. E. Johansson (Skidmore).

107. Wells, E. F., & Hoisington, L. B. Pain adaptation: a contribution to the von Frey-Gold-

scheider controversy. *J. Gen. Psychol.*, 1931, 5, 352-367.—A qualitative study was made of the course of cutaneous pain adaptation when subcutaneous experience was present in the complex and when subcutaneous experience was eliminated. The four types of pain experience that were described are: simple non-pressury pains, simple pressury pains, duomaximal recurrent pains, and multimaximal recurrent pains. The time of adaptation varied widely, being dependent upon the individual, the intensity of the stimulus, and the spot stimulated.—*H. Cason* (Wisconsin).

[See also abstracts 8, 45, 51, 113, 121, 141, 142, 175, 215, 404.]

FEELING AND EMOTION

108. Codet, H. Deux aspects de l'émotivité. (Two aspects of emotivity.) *Ann. méd.-psychol.*, 1930, 88, 429-435.—There are two syndromic groups of emotional manifestations, according to Codet, which exist both in normal states of health and in exaggerated, clinical cases, viz., sympathico-tonic emotional and vagotonic impressionable forms. The two are frequently united in the same individual, though in variable proportions. This distinction is justified by the fact that there is a habitual coexistence of constant somatic symptoms with each well-defined aspect of psychological reaction. He describes the first group as having a tendency towards psychological and physical reactions which are immediate, vivid, and fleeting, and which leave little trace. The second group, the impressionables, are characterized by retarded reactions, the responses to emotional situations being less immediate and striking but more persistent in effect than in the first group. He gives the physical and clinical concomitants for both cases. Codet believes that much can be done in practical therapeutics to orient treatment according to these two divisions, although much additional research is needed to give a proper appreciation of the relative proportion between the two orders of symptoms in each case.—*A. B. Hunter* (Clark).

109. Dysinger, D. W. A comparative study of affective responses by means of the impressive and expressive methods. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 14-31.—The Hathaway psychogalvanic response apparatus was used in connection with a list of stimulus words to determine the relationships between measures of psychogalvanic reaction and of affective response. The results show that the magnitude of the deflection resulting from the exposure of the stimulus word indicates to some extent the degree of the affective state: the deflections which accompanied the responses characterized as "very" pleasant or unpleasant were larger, in 67.5% of the cases, than those characterized merely as pleasant or unpleasant. In most of the remaining cases this correspondence was suggested, and in a few cases it was lacking.—*F. A. C. Perrin* (Texas).

110. Farnsworth, P. R., & Chichizola, T. L. Color preferences in terms of sigma units. *Amer. J. Psychol.*, 1931, 43, 631.—Using Guilford's method of expressing preferences for stimuli in sigma units, 125 boys were tested for color preferences. The values in sigma units were: +.80 (red), +.32 (purple blue), -.07 (green), -.18 (yellow red), -.28 (yellow), and -.52 (purple). It will be seen that the boys in this study did not rate blue above red, as has been generally thought.—*D. E. Johanssen* (Skidmore).

111. Grossart, F. Gefühl und Strebung. Grundlinien einer seelischen Gefühlslehre. II. Teil: Grundfragen der speziellen Gefühlspsychologie. (Feeling and striving. Outlines of a psychological theory of feeling. Part 2: Fundamental problems of the special psychology of feeling.) *Arch. f. d. ges. Psychol.*, 1931, 81, 40-165.—Following the theory developed in his earlier paper, that feelings are based in striving, the author presents in this paper an analysis of the various drives of mental life and points out the correlated feelings. Following this he deals with the problem of the classification of feelings, the problem of distinguishing true and false feeling, and, finally, feeling and the will.—*R. H. Waters* (Arkansas).

112. Hollinghead, L., & Barton, J. W. The adrenal cortex and emotion. *Psychol. Rev.*, 1931, 38, 538-541.—The study of basic factors in emotions has been confined largely to the discharge of adrenalin and visceral movements. Two factors recently discovered: (1) a correlation between emotional instability and variability of the non-protein nitrogen of the blood; and (2) an increase of the weight of the hypophysis of rats following excitement. These findings are shown to be in harmony with the hypothesis that the adrenal cortical hormone is responsible for the variations in the non-protein nitrogen of the blood and that the hormone acts as an excitatory agent in emotional states. The advantage of this function is pointed out in the case of muscular reactions to emotional stimuli.—*A. G. Bills* (Chicago).

113. Hunt, W. A. The pressure correlate of emotion. *Amer. J. Psychol.*, 1931, 43, 600-605.—Using more intense emotional situations, it is found that dull pressure is the correlate of the unpleasant emotions and bright pressure the correlate of the pleasant emotions, just as in the case of simple pleasantness and unpleasantness. It is indicated that the intenseness of the bright pressure in the emotion is no greater than in the case of a purely affective situation, but the unpleasantness experienced in an emotion may be much more intense than that experienced in the affective reaction. The localization of the bright pressure in the chest, of the dull pressure in the abdominal region, is corroborated.—*D. E. Johanssen* (Skidmore).

114. Mowes, L. Why be afraid? Boston: Stratford, 1931. Pp. 103. \$1.00.—Popularly written, this book treats fear from the point of view that it is learned conduct and that abnormal fears are elimi-

nated through achieving contrary behavior. Some specific fears are listed, followed by some specific aids in their elimination.—*E. B. Heim* (Provo, Utah).

115. Olson, D. M., & Jones, V. An objective measure of emotionally toned attitudes. *J. Genet. Psychol.*, 1931, 39, 174-196.—In the measurement of social attitudes by the usual verbal methods much depends upon the subject's ability to report his own emotional responses as well as upon his veracity. In this study an attempt is made to avoid those difficulties through the analysis of involuntary responses made along with the verbal. Verbal stimuli bearing upon religious, racial, social-moral, and economic-political questions, along with controls, were employed in the form of single words for free-association responses and questions to be answered by "yes" or "no." Each subject was instructed to direct his response into a voice key, and simultaneously to press down the fingers of both hands, which rested on tambours. The kymograph recordings of verbal stimuli and responses and of tremors and other variations of finger pressures were analyzed. In the pressures made simultaneously with the responses, no significant differences were obtained; but in the involuntary pressures made just after the stimuli were received and just before the verbal responses were made, quite significant differences were obtained between those made after control verbal stimuli and those after experimental verbal stimuli of all the four types. Pressey X-O test scores correlated little with emotionally toned attitudes measured here. Only small agreement was found between the experimental results and ratings of each subject by fellow-students, but fairly high agreement between the former and self-ratings.—*J. F. Dashiell* (North Carolina).

[See also abstracts 119, 173, 186.]

ATTENTION, MEMORY AND THOUGHT

116. Alexander, J. *Mastering your own mind*. New York: Funk & Wagnalls, 1931. Pp. 58. \$75.—(Not seen).

117. Barthel, E. *Vorstellung und Denken. Eine Kritik des pragmatischen Verstandes*. (Ideation and thinking. A critique of pragmatic reasoning.) Munich: Reinhardt, 1931. Pp. 213. Fr. 45.—The book shows that the intellectual methods which have their foundation in Kant's *Critique of Pure Reason*, and which are almost exclusively applied in modern natural science, have a particular essential significance for practice, but that the human mind through the given categories of pure thinking can grasp the structure of being in its concrete objectivity. A science with a recognition of nature grasps the truth and arranges it objectively, whereas a science governed by nature mistakes the true structure and destroys it in thought. The metaphysics of nature and other departments of total being by means of a new set of fundamental categories provide a concrete methodical stratum. The relation of the subject to

the external world becomes through the theory of the totality of the psyche in conjunction with the thought of Leibniz, somewhat of the symptomatology of Herman Schwarz and N. O. Losskij. The resonance theory of perception lies in the direction of the critical realism of Schwarz, and the intuitive relations between perceptions and their objects in that of Losskij. In the department of natural science this theory of knowledge struggles against the direction of Locke and Helmholtz. In the doctrine of judgment, the book takes the standpoint of a transcendental volition, somewhat in the sense of the explicit act of Fichte and the act psychology of Brentano. The section devoted to space and color theory as well as the relationship of organic to inorganic, and finally an electro-magnetic theory of the astronomical system, are worthy of mention.—*E. Barthel* (Köln).

118. Burt, E. A. *Principles and problems of right thinking; a textbook for logic, reflective thinking and orientation courses*. (Rev. ed.) New York: Harper, 1931. Pp. 542. \$3.00.—(Not seen).

119. Delacroix, H. *La mémoire affective*. (Affective memory.) *J. de psychol.*, 1931, 28, 321-244.—A general discussion concerning the evidence for and the nature of affective memories. He treats affective memory as "the renaissance of an extinct sensibility . . . the hallucination of the past."—*N. L. Munn* (Pittsburgh).

120. Hillebrand, M. J. *Untersuchungen über Vergangenheits- und Zukunftsreaktionen*. (Studies of reactions to past and future events.) *Arch. f. d. ges. Psychol.*, 1931, 82, 153-240.—The study deals with the qualitative and quantitative nature of reactions to stimulus words under three different types of instruction: (1) "Say 'yes' when you comprehend the meaning of the stimulus word"; (2) "To the stimulus word respond with some word referring to your past experiences"; (3) "To the stimulus word respond with some word referring to some possible future experience." Introspective reports of the subject's experience during his reaction were taken. In terms of reaction time there is a constant increase from instruction 1 to instruction 3. Qualitatively the reaction under instruction 1 is of the "free association" sort. The subject's reaction is dominated by the stimulus word, the response is either an automatic one or may follow a greater or less amount of active search. Under instruction 2 the reaction may be either an apparent re-living of the past experience or simply a recall of the experience. Under instruction 3 the subject may seem to live through the future experience or to establish it in a round-about manner. On the basis of these results the author makes the following suggestions toward a theory of memory: The concepts of "act" and "object" are necessary. True memories consist in the re-living of the past experience; all others are quasi-memories. More precisely stated, the basic principles upon which a theory of memory must be erected are: (1) the object of an act of memory is

an experience; (2) the act carries with it a knowledge of our past experiences and a tendency actually to re-experience them; (3) memory carries the impress of immediacy. On the problem of reproduction the author holds that reproduction includes not only the recall of the past but entails a knowledge of and a tendency to live over this previous experience. The problem of personal reference is met by assuming the awareness of the self in all mental processes. The problem of pastness raises two separate questions: (1) What is the origin of pastness? (2) How does it arise in memory? The first is answered on the basis of the assumption of a bare experience of temporal duration, all other temporal relations being referred to experience change. With reference to the second question the author holds that given an experience which is fading, the consciousness "that has just been experienced" is inherently given. This experience is then left as a complex. If this experience is ever reinstated the above consciousness is given with it. Only the more significant of our experiences are thus dated and the frequency of their reinstatement assists in keeping the experience "dated." Of the reactions toward the future three groups may be distinguished: reproductive, intentional and ideational reactions, of which the intentional (in which are included wishes, hopes, set or attitudes) are the least frequent. In all cases the consciousness of the future is borne by thoughts and intentional processes. The concept of future time is given in part through expectation and through the given intuition of the present and the past and future as horizontal extensions of this rather than assuming that the future is a logical construct on the basis of our knowledge of the present and past (data from child psychology argue against this latter conception).—*R. H. Waters* (Arkansas).

121. Höfer, H. Über die Aussagefähigkeit Taubstummer. (On the report ability of the deaf and dumb.) *Arch. f. d. ges. Psychol.*, 1931, 81, 477-550. —The paper is a report of an investigation of the relative suggestibility and report ability of hearing and deaf and dumb children, adolescents and adults. While interested in some of the theoretical aspects of the problem, the author is at the same time aware of the importance of his findings with reference to the use of the deaf and dumb as witnesses. A few of the major findings are: (1) The hearing subjects, as a rule, surpass the deaf and dumb in report on an object card. (2) On certain items, persons, colors, and some other single features the deaf and dumb are superior. (3) In report on an actual event the hearing are superior; this agrees, in a sense, with the opinion of those having to deal with the deaf and dumb as witnesses, since they hold that with proper training and careful questioning the deaf and dumb make satisfactory witnesses. (4) The deaf and dumb are somewhat less suggestible than the hearing.—*R. H. Waters* (Arkansas).

122. Hutchinson, E. D. Materials for the study of creative thinking. *Psychol. Bull.*, 1931, 28, 392-

410.—Very little psychological literature is available on this subject; and it must be studied through the materials contributed from other fields, such as philosophy, literary criticism, art, invention, intuition, mysticism, etc. 152 references are appended.—*J. F. Dashiell* (North Carolina).

123. Kerr, M., Pear, T. H. Unseen drama and imagery; some experimental observations. *Brit. J. Psychol.*, 1931, 22, 43-54.—The objects of the experiments here described were twofold: (1) to examine some aspects of the relationship between voice and the expression of personality, the reactions of different individuals to unseen drama, and the function of imagery in the appreciation of the latter; (2) to investigate auditory imagery under natural conditions and by as concrete, emotion-provoking and "unschematic" a situation as possible. The plays used were transmitted through a gramophone and five different groups of subjects were used. Some of the conclusions were: (1) people with little or no psychological training tended to over-rate the intensity of their imagery; (2) people who liked radio drama had more vivid visual imagery than those who disliked it; (3) in these experimental conditions synesthesia seemed unusually frequent; (4) the importance of prejudices in judging voices and dialects was emphasized; (5) there were indications that the power of abstract thinking and the ability of vivid visualization were not mutually exclusive; (6) it would appear that a good deal of apparently irrelevant imagery is not really irrelevant.—*M. Drury-Smith* (Cambridge, England).

124. Knowlson, T. S. The secret of concentration. New York: Harpers, 1931. Pp. xi + 235. \$2.50.—This book is designed as a practical manual for those wishing to increase their ability to concentrate. The nature and peculiarities of the theory of concentration are developed; the emphasis is upon the value of regular and constant practice. Exercises for training are presented, such as paraphrasing, calculating, unconscious counting, recording of observations and of events, auto-suggestion, memorizing, comparison, analysis of objects and of ideas. "The easiest way to acquire the art of concentration is to develop an increasingly intense interest in the subject at hand."—*M. P. Montgomery* (Faribault, Minn.).

125. McGeoch, J. A., & McDonald, W. T. Meaningful relation and retroactive inhibition. *Amer. J. Psychol.*, 1931, 43, 579-588.—The problem of the present experiment was the determination of the degrees of retroactive inhibition resulting from the interpolation of materials which differ widely in their closeness of meaningful relation to the original lists. The original learning materials were lists of 11 two-syllable adjectives. The interpolated materials were: adjectives which were synonyms of the adjectives in the corresponding position in the original list; adjectives which were antonyms of the corresponding original adjectives; unrelated adjectives; nonsense syllables; and 3-place numbers. The method

of anticipation was used; the original list was presented 5 and the interpolated material 10 times. The amount of inhibition induced decreased steadily from the synonyms to the numbers. In an effort to verify the Skaggs-Robinson hypothesis a second experiment was performed, in which the interpolated materials were lists of synonyms of increasing similarity. The amount of retroactive inhibition varied directly with the degree of synonymy. The authors interpret these results as being in favor of a transfer theory of retroactive inhibition, but they do not follow the Skaggs-Robinson prediction.—*D. E. Johannsen* (Skidmore).

126. Pitkin, W. B. *The art of learning*. New York: Whittlesey House, McGraw-Hill, 1931. Pp. 423. \$2.50.—(Not seen).

127. Port, K. *Der Einprägungswert der Wahrnehmunggebiete. Zugleich ein Beitrag zur Methodologie der Gedächtnispsychologie und zur Lehre von den Vorstellungstypen*. (The memory value of perceptual fields. A contribution to the methodology of the psychology of memory and to the theory of ideational types.) *Arch. f. d. ges. Psychol.*, 1931, 82, 1-100.—The author reports a rather extensive investigation of the relative value of different sensory avenues of presentation on immediate recall. A total of about 300 subjects were employed. Memory material consisted of nonsense syllables and numbers. The study included the following seven types of presentation, given in the order of least to greatest value: visual-kinesthetic (copying seen material), auditory, auditory-kinesthetic (repeating from dictation), visual, visual-auditory-kinesthetic (reading aloud), visual-auditory, auditory-visual-kinesthetic (writing from dictation). He finds that the relative value of the one or the other avenue is a function of the time between presentation and recall, of the temporal extent of the presentation, of the type of material and of practice, and of the method of measuring retention. 73 titles are cited.—*R. H. Waters* (Arkansas).

128. Rashevsky, N. *Possible brain mechanisms and their physical models*. *J. Gen. Psychol.*, 1931, 5, 368-406.—The author gives a systematic discussion of different kinds of physical systems which may possess the property of learning, and attempts to decide which of the possible schemes is most likely actually to be realized in the brain of the higher animals. He describes a physical theory of mental processes, and feels that it will be judged by the new experiments it suggests and by the degree in which the expectation of the theory will be verified.—*H. Cason* (Wisconsin).

129. Shen, E. *The strict implication of Mr. Lewis and the particular proposition in logic*. *Psyche*, 1931, 12, 80-86.—For twelve years the strict implication of Lewis has remained little noticed, but it should have attracted more attention. While it has included the particular proposition it has erred in inferring a particular from a universal. The writer

goes on to establish the particular proposition in its proper place in the logic of propositions.—*T. R. Garth* (Denver).

130. Stahl, R. *Konzentration*. (Concentration.) *Dtsch. Schule*, 1931, 35, 389-397.—The word *concentration* receives many connotations; the exact one accepted by pedagogy is important. A meaning is derived from chemistry, where it means the saturation of a solution. A nearer meaning for pedagogy lies in the physics of light and warmth. Concentration is gathering and holding together at a single point, real or ideal. Definitions are evaluated, and contrasted with attention, interest, association, in the writings of a number of authors quoted. The article emphasizes values for education.—*A. B. Herrig* (Michigan Central State Teachers College).

131. Stahl, R. *Konzentration*. (Concentration.) *Dtsch. Schule*, 1931, 35, 462-471.—The past emphasized a concentration type of attention, the present emphasizes a distributive type. Out of medieval satisfaction in a narrow range of interest man strove to an ever-widening field. Research demands an analysis of distributive attention, with evaluation. Development lies in increased ability to evaluate the worth of thought processes, and instruction must point to that end. Concentration looked at from the standpoint of pedagogical psychology deals with this evaluation process.—*A. B. Herrig* (Michigan Central State Teachers College).

132. Stahl, R. *Konzentration*. (Concentration.) *Dtsch. Schule*, 1931, 35, 519-529.—The article distinguishes pedagogy from psychology and defines the concept "culture." It discusses the two angles of culture, personality culture and social culture. The author conceives of instruction as directed to the comprehension of the whole of culture, acceptance of the limitless breadth of the whole, with concentration on man in relationship to the whole.—*A. B. Herrig* (Michigan Central State Teachers College).

133. Stroud, J. B. *Learning curves for poetry*. *Amer. J. Psychol.*, 1931, 43, 684-686.—Using 3 poems of 20 lines each, 4 feet to the line, as material for learning, 30 S's learned each poem by the reading and reciting method. The average number of trials required to learn to one correct repetition was 17.6. Plotting the number of lines correctly recalled after each reading (ordinate) against the trials (abscissa) S-shaped curves were obtained. A suggested interpretation of this result is that the unit of response (the whole line) was conducive to producing the effect; it is possible that the result is due to something inherent in the processes of learning material of this kind.—*D. E. Johannsen* (Skidmore).

134. Thorndike, E. L. *Der Lernprozess*. (The learning process.) *Vjesh. f. Jugendk.*, 1931, 1, 161-169.—A translation by Adolf Bruckner, who, however, does not give the original source of the article.—*M. E. Morse* (Catonville, Md.).

135. Van Ormer, E. B., & Dallenbach, K. M. *A frequent error concerning Ebbinghaus' experiments*

on oblivescence. *Amer. J. Psychol.*, 1931, 43, 706-707.—It is pointed out that the explanation frequently given of the discrepancy between the results reported by Ebbinghaus and those reported by other observers on forgetting is incorrect. The explanation usually given is that Ebbinghaus used one correct recitation as the criterion of learning, as contrasted with the two repetitions demanded by other experimenters. It is pointed out that the Ebbinghaus experiments were done during two different periods (1879-1880 and 1883-1884), and that during the earlier (and more important) period the two perfect repetitions were the standard used.—*D. E. Johanssen* (Skidmore).

[See also abstracts 151, 167, 188.]

NERVOUS SYSTEM

136. *Economu, C. v. Cerebración progresiva y fundamentos del talento. Arch. de neurobiol.*, 1931, 11, 103-120.—A discussion concerning the development of cerebral structure. The greatest difference between the structure of the human brain and that of the lower vertebrates is in the association areas. This difference of structure is qualitative as well as quantitative and is due to a progressive biological development of the cerebrum. Hypotheses of Haecke's law of orthogenesis, Dolé's law of irreversibility and Mollison's "protein differences" theory are cited as possible explanations of this development. A method of making a "plastic" model of the brain is cited. By this method lasting records of the external form of the brain may be kept, and it is through this external form that the structural development can best be studied.—*C. C. Neet* (Clark).

137. *Fenn, T. P., & Gerard, R. W. Mechanism of nerve asphyxiation, with a note on the nerve sheath as a diffusion barrier. Proc. Soc. Exp. Biol. & Med.*, 1930, 27, 1073-1076.—The rapid recovery of asphyxiated nerve after restoration of oxygen suggested that nerve might recover in the presence of another reducible substance. In this study it was found that frog sciatics, with the nerve sheath intact, fail to recover when bathed in Ringer solution buffered at pH 7 or 8, or in a similar solution plus 0.5% methylene blue or 1-naphthol Z-sulphonate indophenol. With the sheath split longitudinally, the asphyxiated nerve showed a definite recovery in methylene blue and also in Ringer solution, the action potentials returning to about one-third their original value. A table shows the time required to block by various agents, for nerves with intact and split sheaths. The writers give a discussion of asphyxial block and the effects of various agents on recovery.—*H. R. Thompson* (Stanford).

138. *Foa, C., & Peroni, A. Primi tentativi di registrazione delle correnti d'azione del nervo acustico. (Preliminary experiments on the recording of action currents in the acoustic nerve.) Arch. di fisiol.*, 1931, 28, 237-241.—The authors summarize the previous researches on action currents in sensory

nerves and give their own results obtained from work conducted on the acoustic nerve of large specimens of *Thalassochelys caretta* which were put at their disposal by the Naples zoological station. Results obtained from five experiments were of a like nature: no matter what was the origin of the sound, the response was the same. The electrical response was always discontinuous, and its rhythm was maintained around 50 to 60 impulses per second, the peaks of the curve remaining very distinct, although they were sometimes regular and sometimes, on the contrary, overlapping. The authors applied their results to the theories on the function of the acoustic apparatus. The constancy of the electric response of the acoustic nerve for sounds of various pitches indicated to them that it is due solely to the nerve centers that we have recognition, minute analysis, and synthetic evaluation of tones and noises which the ear, by means of its very specialized structure, has been able to receive and transform into sensory stimulations.—*M. Ponso* (Turin).

139. *Gerard, R. W. Further observations on the oxygen consumption of nerve. Proc. Soc. Exp. Biol. & Med.*, 1930, 27, 1052-1055.—This report covers observations on frog, rabbit, and dog nerve, made over a period of two years by the Warburg technique. Previous differences in observations reported by Fenn and Gerard are brought to closer agreement. The effects of various chemical agents and of electrical stimulation on oxygen consumption are reported and discussed.—*H. R. Thompson* (Stanford).

140. *Halper, L. Über die Ausbreitung von Strömschleifen im Nervengewebe bei Reizung mit Induktionströmen. (The spreading of the current track in the nerve plexus in stimulation with induction currents.) Pflüg. Arch. f. d. ges. Physiol.*, 1930, 225, 49-50.—The conclusions were that the widening of the track depended upon the thickness of the nerve; the thicker the nerve the wider the track becomes.—*D. S. Oberlin* (Bryn Mawr).

141. *Henschen, S. E. Ueber spezifische Lichtsinn- und Farbensinnzellen im Gehirn. (Specific cells in the brain for organs of light and color perception.) Acta psychiat. et neur.*, 1931, 6, 347-355.—The organs of light perception are more numerous for the central field than for the periphery. This indicates that visual acuity and fine color discrimination are characterized anatomically by an increase in cells. The cells for the perception of light are smaller than those for the perception of color. Four plates are given.—*M. B. Mitchell* (George School, Pa.).

142. *Ingram, W. R., Ranson, S. W., & Hannett, F. I. Pupillary dilatation produced by direct stimulation of the tegmentum of the brain-stem. Amer. J. Physiol.*, 1931, 98, 687-691.—Various points in the brain-stem and in the ventral part of the diencephalon were stimulated in the cat with a faradic current of low intensity. The dilatation of the pupils could be obtained from many regions besides the sub-thalamic nucleus. It could be obtained regularly from all points in the tegmentum of the mesen-

cephalon and pons.—*C. Landis* (N. Y. Psychiatric Institute).

143. Kuntz, A. A text-book of neuro-anatomy. Philadelphia: Lea & Febiger, 1931. Pp. 359. \$5.50. —"The material has been arranged with a view to giving the student an adequate conception of the human nervous system as a whole early in the course and then to acquaint him with the simpler reflex and correlation mechanisms." As the title suggests, the treatment is primarily anatomical, with relatively brief reference to the functional aspects. The anatomy of the conduction pathways and cerebro-spinal nerves is dealt with under the usual more or less functional classifications. A short section on the functions of the cerebellum summarizes the older theories and discusses the recent theory of synergia. Similarly, the functional relations of the diencephalon are described in one page. The localization of function in the cerebral cortex is considered in terms of topography and cytoarchitectonics, with the conclusion that the cortex is not equipotential with regard to its higher psychic functions. In this chapter, as well as an earlier one on nervous integration, the reflex is considered as the functional unit of organization. The author states: "The cortex plays still a higher rôle in behavior through its capacity to recombine lower reflex units in patterns determined not only by the present stimulus complex but in part also by the vestiges of previous reactions of similar character." A list of collateral readings follows each chapter and a page of references to general neurological literature is placed at the end of the text. There are 197 engravings.—*H. Peak* (Yale).

144. Lewy, F. H., & Weiss, S. Über Chronaxie. (Chronaxy.) *Fortsch. Neur., Psychiat. u. Grenzgeb.*, 1931, 3, 372-387.—The authors describe the methods for the determination of chronaxy and give the present status of the subject. They discuss the findings in the normal organism under various physiological conditions, and the clinical applications of the method in numerous diseases and in lesions of the central nervous system and the peripheral nerves. The authors' personal contributions to the subject are in the fields of lead poisoning and the behavior of dystrophic muscles under adrenalin treatment. In the former case they found that chronaxy is more sensitive than other methods in early diagnosis. Weiss discovered that whereas before adrenalin treatment the chronaxy of dystrophic muscles was prolonged, after administration of the drug it was decreased. The authors refer this to the action of the sympathetic, which has a two-fold rôle in muscle function: in the absence of sympathetic influence, dystrophic changes appear, and in the intact organism it lowers irritability. When its influence is removed, chronaxy is increased, and adrenalin produces the same result. In summarizing investigations on the subject: a new viewpoint and a better understanding of a whole series of hitherto obscure phenomena is attained with the help of motor chronaxy. With sensory chronaxy, also, it is possible to discover disturbances of sensa-

tion not revealed by other methods, and to study the influence of the vegetative nervous system on sensory processes.—*M. E. Morse* (Catonsville, Md.).

145. Pérez, R. M. Una importante modalidad de terminación nerviosa de la piel humana. (An important mode of nerve termination in the human skin.) *Arch. de neurobiol.*, 1931, 11, 23-29.—A study of the nerve endings in the skin of the hand. Three figures showing the ramifications of the nerve endings are presented.—*C. C. Neet* (Clark).

146. Ranzani, S. Considerazione sul così detto gradiente assiale. (Considerations on the so-called axial gradient.) *Atti soc. ital. prog. sci.*, 1927, 553-554.—(*Biol. Abst.* V: 20012).

147. Rizzolo, A. The rôle of the pyramidal system in the return of motility in a limb after hemisection of the spinal cord. *Arch. de fisiol.*, 1931, 29, 586-592.—The author has endeavored to determine whether or not the pyramidal system from the cruciate gyrus contralateral to a hemisection of the spinal cord of the cat becomes functionally involved in the return of motility in a posterior limb affected by a hemisection. Three methods were employed: (1) electrical stimulation and chronaxy, (2) local chemical stimulation with strychnine, (3) surgical ablation. The following conclusions were drawn: (1) The loss of motility in a posterior limb following hemisection of the spinal cord is a direct consequence of a functional elimination of a sufficient number of fibers innervating the limb above the site of the lesion. (2) The restoration of function is due in a large measure to the taking over of the pyramidal fibers crossing below the site of the lesion. (3) The marked functional involvement of the pyramidal fibers crossing below the site of the hemisection in the return of motility is evidence that the restitution can be explained in terms of known pathways in the central nervous system, which pathways constitute the main systems of motility.—*A. Rizzolo* (Newark, N. J.).

148. Roberti, C. E. Sul comportamento della macroglia e degli elementi nervosi nelle intossicazioni sperimentali da istamina, guanidina, acido cloridrico, acetato di piombo e acetato talloso. (On the behavior of the macroglia and the nervous elements in experimental intoxication with histamin, guanidin, hydrochloric acid, acetate of lead and thallium acetate.) *Rass. di stud. psichiat.*, 1931, 20, 7-20.—The author experimentally intoxicated groups of dogs and rabbits with histamin, guanidin, hydrochloric acid, acetate of lead and thallium acetate, and examined the behavior of the nerve elements and of the neuroglia. From the sum of the data collected, he concludes that in toxic experimental syndromes the macroglia does not react in an ordinary defense direction, but degenerates more or less rapidly. This phenomenon appears to be connected with the highly toxic action of the substances employed, which would seem to act at first in a paralyzing and successively in a degenerative direction. The author advances the hypothesis that some selective factor,

variable from one substance to another, may not be foreign to such action.—G. C. Ferrari (Bologna).

149. Roberti, C. E. Contributo allo studio del comportamento della neuroglia e degli elementi nervosi nelle sindromi mentali tossiche (amnesia e demenza precoce iniziale). (Contribution to the study of the behavior of the neuroglia and of the nervous elements in toxic mental syndromes (amentia and initial dementia praecox).) *Rass. di stud. psichiat.*, 1931, 20, 30-56.—The author has examined the aspect of the neuroglia in comparison with that of the nerve cells in four cases of mental confusion and in two cases of initial schizophrenia. Two of the cases of mental confusion were plain, that is, they were not following preexistent mental diseases, while the other two cases, taken as special controls, came on in the course of chronic alcoholism. The latter does not show the phenomenon of defense reaction in the neuroglia, but decays in a different way from the nervous elements. The influence of pre-existing anatomical changes in secondary mental confusion is evident; if amentia comes during mental disease there are different regressive changes of the neuroglia, the histological aspect depending upon the previous pathological process. In schizophrenia the regressive alterations of the astrocytes are the same as in plain amentia.—G. C. Ferrari (Bologna).

150. Weiss, P. Resonanzprinzip der Nerventätigkeit, dargestellt in Funktionsprüfungen an transplantierten, überschüssigen Muskeln. (The resonance principle of nerve activity demonstrated by functional tests on transplanted, supernumerary muscles.) *Pflüg. Arch. f. d. ges. Physiol.*, 1930-31, 226, 600-658.—To determine whether each muscle has its own specific excitation form was the object of this research. Leg muscles were transplanted from one leg to the other, and their functioning was compared to those in normal position. The principle of specific excitation was found to hold, except in a few cases which were explained on the basis of a possibility of an undifferentiated selective apparatus.—D. S. Oberlin (Bryn Mawr).

[See also abstracts 153, 169.]

MOTOR PHENOMENA AND ACTION

151. Allison, L. W. Difficulty as a factor in the standardization of a maze. *J. Gen. Psychol.*, 1931, 5, 514-518.—The purpose of the study was to determine the effect of changing the difficulty of a high relief finger maze (1) on its reliability, and (2) on its relation to performance on the Army Alpha test and to efficiency in psychological examinations. One group learned the maze under the usual blindfold conditions, and the second group, also blindfolded, learned the same maze by the visual-exposure method. Visual exposure decreased the reliability of the maze from .90 to .71, and lowered the correlation between Army Alpha scores and maze performance from .61 to .49, but the relation between the maze and psychology grades was not ap-

preciably changed, correlations of .50 and .52 being obtained.—H. Cason (Wisconsin).

152. Allison, L. W. The effect of variation in length of a high-relief finger maze upon rate of learning. *J. Genet. Psychol.*, 1931, 39, 403-407.—The Warner-Warden linear pattern was used in constructing a high-relief human finger maze in lengths of 4, 6, 8, and 10 culs-de-sac. It was found that increase in length of the maze did not result in a proportionate increase in difficulty, which is consistent with the finding of Warner and Hamilton on the rat maze, and, like the latter, inconsistent with typical findings in the memorizing of nonsense-syllable series. However, it is pointed out that whereas in a maze each additional unit is the same in kind as the preceding units, in a syllable list each additional unit is comparable but different.—J. F. Dashiell (North Carolina).

153. Bainbridge, F. A., & Mensies, J. A. *Essentials of physiology*. (7th ed., rev. by H. Hartridge.) London: Longmans, 1931. Pp. 583.—"In the sixth edition the chapters dealing with the sensory, nervous and muscular aspects of physiology were rewritten. In this edition the remainder of the book has been similarly dealt with. . . . The book has been subdivided into somewhat smaller chapters. More space has been devoted to the basic principles, with the introduction of new chapters on the acid-base balance and the salt balance of the body. The respiratory system has been rewritten and divided into five chapters, one of which deals with respiration under abnormal conditions. The chapters on the central nervous system have been rearranged and revised. The ductless glands and sex organs have had greater space assigned to them so as to enable more adequate treatment to be given to these important branches of physiology."—R. R. Willoughby (Clark).

154. Barker, R. G. A temporal finger maze. *Amer. J. Psychol.*, 1931, 43, 634-636.—Description of the manner of making a finger maze on the principle of Hunter's temporal maze. The results from the learning of a spatial maze offering much the same pattern and from the temporal maze indicate that the two problems are not the same. The introspective reports indicate that it was the "particular pattern elements which were learned rather than the universal pattern elements of 'rightness,' 'leftness,' 'upness,' and 'downness.'"—D. E. Johannsen (Skidmore).

155. Best, C. H., Furasawa, K., & Ridout, J. H. The respiratory quotient of the excess metabolism of exercise. *Proc. Roy. Soc. Lond. (B)*, 1929, 104, 119-151.—(*Biol. Abst.* V: 20034).

156. Blackburn, J. M. Individual differences in the performance of a simple test. *Brit. J. Psychol.*, 1931, 21, 385-393.—The object of this paper was to show the large number of individual variations which can occur in the performance of a comparatively simple test, and to urge the desirability of combin-

ing subjective estimates with objective methods of marking. The subjects used were army recruits of less than three months' service, an aiming test with targets being used as apparatus. A list is given of the mistakes made in each round, and a discussion of these supplied. The mistakes of 58 out of 128 subjects are analyzed. No satisfactory estimate of the relative importance of the different kinds of recurrent and non-recurrent mistakes could be obtained. For a purely objective method of marking the subjects for accuracy in aiming, all the records of the 58 who made mistakes must be discarded; the rejection of other records for other reasons must then be considered. If, however, the objective method of marking is supplemented by subjective estimates of various qualities possessed by the subjects, all the records can be retained.—*M. Drury-Smith* (Cambridge, England).

157. Burns, C. L. C. Movement and types in children. *Psyche*, 1930, 11, 63-66.—Rhythm is merely the expression of order and symmetry. The influence of rhythmic movement is widely used for treatment of disorder and asymmetry of the body. The Margaret Morris movement is used in the treatment of nervous disorders in children in London with excellent results. Each type of defect requires its type of movement for maintenance of mental health.—*T. R. Garth* (Denver).

158. Chappell, M. N. In reply to Landis. *J. Comp. Psychol.*, 1931, 12, 289-292.—The author replies to Landis' article (*J. Comp. Psychol.*, August, 1930), in which his previous article, *Blood Pressure Changes in Deception* (*Arch. Psychol.*, 1929, No. 105), is challenged on three points. The author defends his statement that Landis and Gullette used gross treatment. This is illustrated with extracts from their article. He points out that the term "lateral" pressure has been widely used. In conclusion he shows that the so-called "continuous" method, to which Landis erroneously refers as "the Erlanger '04 method," does not measure systolic pressure or any other known pressure.—*M. N. Chappell* (Columbia).

159. Chappell, M. N. A comparison of blood-pressure methods. *J. Genet. Psychol.*, 1931, 39, 398-403.—"Erlanger did not intend that his instrument should be used continuously, and physiologists appear never to have so used it. Psychologists, however, have been more optimistic, if less cautious, in its use." Data taken simultaneously on each of 28 subjects by the intermittent and by the continuous method show no very great correlation between the two; and it is concluded that the continuous method really does not measure systolic blood-pressure, as Larson and Landis had assumed.—*J. F. Dashiell* (North Carolina).

160. Child, C. M. Physiological dominance and physiological isolation in development and reconstitution. *Zsch. Wiss. Biol. Abt. D. Wilhelm Roux' Arch. Entwicklungemech. Organ.*, 1929, 117, 21-66.—(*Biol. Abst. V*: 20007).

161. Claremont, C. A. The psychology of sea-sickness. *Psyche*, 1930, 11, 86-90.—It fits all fact to assume that sea-sickness is due to the unusual conflict between sensations normally combined in other ways. In traveling in a car we are not sea-sick because the movements of the car are anticipated through the eye. Advice of a non-drug character follows: one should close his eyes, lie flat with no side touch, fix his mind on the ship's movements and imagine himself moving through space, noting his pressure feelings and letting no one disturb him, and not moving even an arm.—*T. R. Garth* (Denver).

162. Pomin, S. W. Über den Einfluss des Trainings auf die mineralischen Substanzen der Muskeln. (The influence of training on the mineral substances of the muscles.) *Biochem. Zsch.*, 1930, 217, 423-429.—(*Biol. Abst. V*: 20037).

163. Fossler, H. R. Range and distribution of tremor frequencies. *J. Gen. Psychol.*, 1931, 5, 410-414.—A study of tremor rates by the refined technique of Travis and Hunter with a large number of cases and under a variety of conditions.—*H. Cason* (Wisconsin).

164. Freeman, G. L. The spread of neuro-muscular activity during mental work. *J. Gen. Psychol.*, 1931, 5, 479-494.—A method is described of studying the activity of muscle groups in the intact human subject. An investigation, principally qualitative, was made of the muscular consequences of (1) maximal and minimal finger-flexion, (2) sensory reaction to two intensities of auditory stimulation, (3) sensory and motor reaction sets, (4) alteration in verbal and occasional instruction, (5) mental arithmetic, and (6) practice in learning nonsense syllables and in acquiring a pursuit skill. There were observations on the thickening of the quadriceps, arm, and jaw muscles while the subject was anticipating or executing the tasks. The results do not verify any particular hypothesis, but they furnish evidence of the general fertility of the motor theory.—*H. Cason* (Wisconsin).

165. Groebbel, F. Die Lage- und Bewegungsreflexe der Vögel. XII Mitteilung. Die Wirkung von Läsionen verschiedener Hirnteile auf die Lage- und Bewegungsreflexe der Haustaube und ihre anatomisch-physiologische Analyse. (The posture and movement reflexes in birds. 12th communication. The effect of lesions in various parts of the brain upon the posture and movement reflexes of the pigeon and their anatomical-physiological analysis.) *Pflüg. Arch. f. d. ges. Physiol.*, 1930, 225, 340-356.—Using 73 pigeons, and extirpating various parts of the brain, the author found various correlative reactions in the pupillary reflex, turning reactions, wings, tail and legs. The various extirpated and injured parts were the labyrinth, the medulla oblongata, the entire brain, one hemisphere, one or both of the optic lobes, and combinations of these.—*D. S. Oberlin* (Bryn Mawr).

166. Hull, C. L. Goal attraction and directing ideas conceived as habit phenomena. *Psychol. Rev.*, 1931, 38, 487-506.—The author argues that the drive stimulus which acts adequately for the random seeking reactions of a hungry organism is insufficient alone to produce the integration of complex behavior sequences such as are involved in maze learning. In addition the presence of the reward causes anticipatory goal reactions to accompany the sequence leading to the full overt goal reaction. The kinesthetic stimulation resulting from these persistent anticipatory actions produces a second stimulus which persists along with the drive stimulus and depends upon it. Certain facts are thereby made understandable, such as the facts that withholding the usual reward causes disintegration of one particular habit sequence without preventing the pursuit of alternative sequences based on the same drive, and the fact that the substitution of one reward for another in the same situation causes disintegration. The author believes that anticipatory goal reactions are the physical substance of purposive ideas and the basis of what is known as ideomotor action.—A. G. Bills (Chicago).

167. Husband, R. W. Comparative behavior on different types of mazes. *J. Gen. Psychol.*, 1931, 5, 234-244.—80 human subjects were employed in a study of the difficulty of, and the methods used in learning, four mazes: (1) Warden U-maze in stylus form, (2) Miles' high relief finger maze, (3) maze with units in the Miles X-form, and (4) Stone multiple-T made into a high relief finger maze.—H. Cason (Wisconsin).

168. Husband, R. W. Analysis of methods in human maze learning. *J. Genet. Psychol.*, 1931, 39, 258-278.—To study "internal" aspects of the learning process a four-section multiple-U high relief finger maze was set as a task for blindfolded adults; the subjects were divided into four groups of 80 each, practicing on one, two, three, and four sections, respectively. It was found that three qualitative methods were used in the learning (verbal, motor, and visual) as well as combinations of these; and that individuals sometimes shifted from one method to another. The verbal (counting) method was used by the greatest number of subjects, the visual (imagery) by the fewest. As measured by learning scores, the verbal was found to be most efficient, and the motor least so. Transfer effects (between finger and stylus mazes) and savings on relearning were also studied. "Much of the high variability which has always characterized maze results was found to be due to the many different methods used in learning," and it is urged that learners should have careful coaching in best procedures.—J. F. Dashiell (North Carolina).

169. James, H. E. O. The problem of interference. *Brit. J. Psychol.*, 1931, 22, 31-42.—The aim of this paper is to examine the process of interference and to determine whether the theory of the problem is capable of greater precision and develop-

ment. It also links up the general work on interference with the systematic work of Pavlov on inhibition. Interference phenomena can be explained in terms of Pavlov's inhibition. There is insufficient evidence for deciding whether internal inhibition also causes interference. Accepting this position, interference appears to be of two kinds: (1) that caused by variation of the response where a given response should be maintained in spite of variation of the situation; owing to a neutralizing process, probably based on internal inhibition, interference of this type usually diminishes; (2) that caused by maintenance of a response where a variation of response is required. The interference is severest when the situations to which different responses are required are most alike. On the setting up of internal inhibition is based the elimination of this kind of interference. Detailed observations should be made of the responses themselves and their interrelations, because they are important factors in the interference.—M. Drury-Smith (Cambridge, England).

170. Jokl, E. Beiträge zur Physiologie des Weitsprungs, des Starts und des Laufes. (Contributions to the physiology of the broad jump, the start and the run.) *Arbeitsphysiol.*, 1930, 2, 347-361.—(*Biol. Abst.* V: 20038).

171. Krenger, E. G., & Hull, C. L. An electrochemical parallel to the conditioned reflex. *J. Gen. Psychol.*, 1931, 5, 262-280.—An electrochemical model is described which parallels the behavior of the mammalian conditioned reflex in several respects.—H. Cason (Wisconsin).

172. Langdon, J. N. A note on the repetition of a simple motor test. *Brit. J. Psychol.*, 1931, 22, 55-61.—The writer considered that repetition on widely separated occasions was the most profitable method of determining the reliability of a test, and that the diagnostic value should also be determined by repetition until the final stage of practice was approached. His tables show measures obtained from the scores made by 19 subjects in each of a series of trials, occurring at irregular intervals, at a simple motor test ("knotting" and match insertion). In each test there was a marked improvement, though the practice periods were short and widely separated. A comparison of the mean variability for three successive stages of practice showed a small but regular decrease with practice. In each test the variability was lowest in the series composed of the highest single score of each subject; it would appear probable, therefore, that variability under optimal conditions is likely to be less than usual. Correlation coefficients showed that there was a tendency for a trial to be most intimately related to those trials temporally near itself. The high correlation between the best single score and the total score indicated a close connection between performance under normal and optimal conditions. A negative correlation was found between initial performance and absolute gain in the two final performances. If one adopts the total score as a suitable measure of ability within the

period of observation, then the correlation between this and each trial indicates the value of each successive trial as a measuring instrument.—*M. Drury-Smith* (Cambridge, England).

173. Lieben, S., & Kahn, R. Die emotionelle Reaktion der Pupille. (The emotional pupillary reaction.) *Pflüg. Arch. f. d. ges. Physiol.*, 1930, 225, 699-704.—Under deep narcosis, the emotional pupillary reaction disappears after the stimulation of certain nerves. With a decrease of narcotic depth the first phase of the phenomenon appears. After cerebral extirpation, it is impossible to produce the emotional pupillary reaction, and likewise in the case of other extirpation. The appearance of this reaction seems to be dependent on the intact functioning of the cerebrum. The dilation consists essentially of a reflex checking of oculomotor sphincter tonus.—*D. S. Oberlin* (Bryn Mawr).

174. Mays, L. L. Continuity of movement and error elimination in the stylus maze. *J. Comp. Psychol.*, 1931, 12, 279-288.—The speeds of eliminating two types of cul-de-sac in the stylus maze were compared. The first type was the usual cul-de-sac which forces the subject who has entered it to reverse his movements in order to return to the true path; this was called by the customary term "blind alley." The second type permitted the subject to move forward continuously without being blocked (except by turns in the pathway) and to return to the true path without reversing his movements; this was termed an "open alley." The maze used contained six alleys any one of which could be converted into an open or a blind alley. Forty subjects ran the maze, twenty with the alleys set "open" and twenty with the alleys set "blind." The alleys were eliminated more slowly when set open than when set blind according to all criteria used: time, trials, errors, and number of alleys fixated. An alley was considered fixated when it was entered once and only once for twenty successive trials, the subject apparently believing that the alley formed a part of the true path.—*L. L. Mays* (Chicago).

175. Nyssen, R. Les variations pléthysmographiques des extrémités sous l'influence de la douleur chez l'homme. (Plethysmographic variations in the extremities in man under the influence of pain.) *J. de neur. et de psychiat.*, 1930, 30, 842-850.—The author discusses various investigations on the vasomotor changes which accompany psychic processes. Some authors hold that the peripheral vaso-constriction is a defense reaction, while others believe that it accompanies psychic activity regardless of the quality of the mental phenomenon. All agree, however, on the diminution of the plethysmographic volume of the arm in pain. The author's own experiments, on the other hand, showed that in the majority of normal subjects pain caused an increase in the volume of the extremities, which seems to be due primarily to a passive distention of the vessels through an increase of the diastolic pressure. A

bibliography of 18 titles is given.—*H. Sys* (New York City).

176. Petri, O. Il meccanismo della volizione. (The mechanism of volition.) *Riv. di cultura*, 1931, 12, 50 ff.—There is no conflict between conscious and subconscious volition, the latter being composed of phylogenetic stratifications, as Freud has said. On the contrary there is tacit, joint cooperation. Intelligence is always alert to regulate either volition or inhibition, except in psychopathic cases. Anomalies of education and the absence of a development of inhibitory powers give rise to states of volitional exaltation and to volitional impulses in which caprice is predominant, a condition which renders impossible a manifestation of the ordinary will processes.—*V. D'Agostino* (Turin).

177. Popow, A., Kudrjancew, A., Gubarew, F., & Pomanowskaja, W. Der Einfluss des Zentralnervensystems auf die Ernährungsprozesse. (The influence of the central nervous system on the nutrition process.) *Pflüg. Arch. f. d. ges. Physiol.*, 1930-31, 226, 377-392.—A group of decerebrated pigeons and a group of normal ones were used in this experiment. The decerebrated ones lost less weight when fed with sterilized rice than did the normal ones, but they died sooner. In the case of absolute hunger the decerebrate ones lived longer. The supposition is that in the case of sterilized rice, that any poisonous substance which may have been there would affect the decerebrate birds because of their heightened sensitivity. Small doses of alcohol did not produce any great differences between the groups, nor did heavy feeding. The conclusions were that the removal of the cerebral hemispheres hindered the growth of the bird because of the disturbance of lability.—*D. S. Oberlin* (Bryn Mawr).

178. Regnault, F. Influence de la volonté sur la fonction et la morphologie des muscles. (Influence of will on the function and morphology of muscles.) *Bull. soc. anthrop. Paris*, 1927, 8, 165-168.—(*Biol. Abst.* V: 20039).

179. Roasenda, G. Neuro-ipofisi ed erezione. (Neuro-hypophysis and erection.) *Riv. di pat. nerv. e ment.*, 1931, 37, 75-88.—In a young man of 24 with incontinence of urine and absence of sexual stimulation for two years, the injection of certain hypophyseal preparations (pituglandol and pituitrin) caused disappearance of the incontinence, immediate erection after the injection, and reestablishment of the sexual function after several injections. The author submits these facts in connection with the known influence of hypophyseal products upon the musculature in general.—*G. C. Ferrari* (Bologna).

180. Rosa, L. A. Espressioni e mimica. (Expression and mimetics.) Milan: Hoepli, 1929. Pp. xviii + 553.—In the first part of the book the author deals with the mimetic exteriorizations of the human countenance, and in the second part with pantomime. He tells of having had special occasion to study the emotional mimetic expressions of his

comrades during the war. He watched their expressions, making sketches of them. In so far as gesticulation is concerned, his graphic illustrations are the result of stenographic notes taken en route while he was watching the naturalness of the men's gestures and attitudes. Several hundred of the sketches illustrate a great many mental situations, including thought and action. In the first place, the physiognomie or pantomimic moment fixated in the sketches is accompanied by comments, at the foot of each figure, of such a nature as to aid the examiner in observing details which might otherwise go unnoticed; in the second place, we find that the static impression of the figure had been transformed into a clear impression of movement by means of special signs (arrows, curves, angles, circles, and zig-zag lines) which serve as a dynamic integration of the sketch. In order to make clear the evolution of a gesture in a situation under consideration, two or three successive moments are sometimes shown in the same figure or in following figures. The author briefly summarizes certain principles and general laws which govern mimicry and human gesture. A general index of the situations to be discussed is given in the introduction. The book ends with several tables in color which illustrate the muscles of the head, neck, eye, and mouth. The author uses these tables in a description, made in the beginning of the book, of the functions of the muscles of the above-mentioned parts of the body in mimicry.—*M. Ponso (Turin)*.

181. Rounds, G. H., & Poffenberger, A. T. The measurement of implicit speech reactions. *Amer. J. Psychol.*, 1931, 43, 606-612.—Description of a method for getting kymographic records of subvocal speech by means of breathing curves. Sample curves are given to indicate the type of results obtained.—*D. E. Johannsen (Skidmore)*.

182. Rückert, W. Über die tonischen Eigenschaften fötaler Muskeln. (The tonic properties of fetal muscles.) *Arch. exper. Pathol. u. Pharmacol.*, 1930, 150, 221-235.—(*Biol. Abst. V: 20040*).

183. Schneider, E. C., & Foster, A. O. The influence of physical training on the basal metabolic rate of man. *Amer. J. Physiol.*, 1931, 98, 595-601.—In a study of the basal metabolic rate during athletic training, it was found that this rate was lowered in 7, unchanged in 1 and elevated in another during training. A period of moderate physical training raised the rate in two and lowered it in a third non-athlete.—*C. Landis (N. Y. Psychiatric Institute)*.

184. Skinner, B. F. The concept of the reflex in the description of behavior. *J. Gen. Psychol.*, 1931, 5, 427-458.—The author analyzes the reflex as a concept in the description of behavior, after the scientific method formulated by Mach and Poincaré. Descartes discovered the stimulus, but he was principally interested in supporting metaphysical contentions concerning the automaticity of animals. The notion of the reflex developed independently of Descartes from the investigation of irritability; and

Robert Whytt made the first historically effective observations. Marshall Hall cleared the concept of psychical counterparts, but his distinction between reflex and voluntary action eventually resulted in the unfortunate historical definition of the reflex as a form of movement, unconscious, involuntary, and unlearned. The observed correlation of a stimulus and a response is the only characteristic by which the concept may be defined. The negative characteristics of involuntary, unconscious, and unlearned have proceeded from unscientific presuppositions concerning the behavior of organisms. Reflex physiology attempts to describe the events which intervene between a stimulus and a response. The essence of the description of behavior is the determination of functional laws describing the relationship between the forces acting upon, and the movements of, a given system; and the reflex is the precise instrument for this description.—*H. Cason (Wisconsin)*.

185. Smith, A. E., Martin, D. S., Garvey, P. H., & Fenn, W. O. A dynamic method for measurement of muscle tonus in man. *J. Clin. Investigation*, 1930, 8, 597-622.—(*Biol. Abst. V: 20041*).

186. Smith, F. O. Variations in the galvanic response. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 142-152.—This study is concerned with variations in the direction, latency, magnitude, time, and number of deflections shown by the Hathaway apparatus under conditions of different stimulating situations for different observers. It was found that the direction of deflection varies with individuals for all stimuli: with the majority of observers, all of the deflections were to the right; with the others, deflections were to the left for certain stimuli and to the right for all others. The latency of response varies with the intensity of the stimulus and with individuals; it was greater when the deflection was to the right. Magnitude and time vary with the direction, the stimulus, and the individual. The number of deflections, in a 20-second period, is fairly constant for all stimuli, but varies with the individual observer.—*F. A. C. Perrin (Texas)*.

187. Tuttle, W. W. The effect of exercise on the Achilles-jerk. *Arbeitsphysiol.*, 1930, 2, 367-371.—(*Biol. Abst. V: 20042*).

188. Valentine, W. L. A study of learning curves: III. The relationship between a growth curve and the arc cotangent function. *J. Gen. Psychol.*, 1931, 5, 251-255.—The author shows that "the arc cot function is a close approximation of the 'growth' curve derived from the assumption that the rate of learning is proportional to what has already been learned and to that which remains to be learned."—*H. Cason (Wisconsin)*.

189. Vogeler, E., & Gullford, J. P. Learning to inhibit and to control breathing. *Amer. J. Psychol.*, 1931, 43, 624-630.—Two groups of S's (5 in each group) were used in an experiment to determine the possibility of voluntary control of reflexes. The first

group practiced 15 days in "holding" the breath; the second group practiced "slow breathing." The average ability to hold the breath before practice was 30 sec., and for slow breathing 80 sec. The improvement of the former was about 65%, of the latter about 207%. It is suggested that greater improvement would occur with more practice, for neither of the learning curves appeared to have reached a permanent level.—*D. E. Johannsen* (Skidmore).

190. *Waters, R. H.* The effect of incorrect guidance upon human maze learning. *J. Comp. Psychol.*, 1931, 12, 293-302.—A group of 40 subjects were given incorrect guidance in maze learning by following the exact pathway taken by their paired subjects in the control group. The experimental group were informed that they would be taken over such a pathway. It was found that the experimental group acquired the maze habit in reliably fewer trials, somewhat fewer cul-de-sac errors, more retracing errors and more time than did the control. In retention tests one week later the experimental group retained the habit less well than the control in terms of absolute recall, although the saving scores of the former were very slightly superior. The records of the experimental group were then compared with those of two groups given correct guidance, but in all other respects comparable. It was found that the incorrectly guided group learned the maze in fewer trials but were inferior in all other criteria to both of the correctly guided groups. In retention tests the saving scores of all groups were about the same although the incorrectly guided group retained less of the habit than did the other two in terms of absolute recall.—*R. H. Waters* (Arkansas).

191. *Waters, R. H., & Ellis, A. L.* The relative efficacy of free and guided learning when equated in terms of time. *J. Comp. Psychol.*, 1931, 12, 263-278.—The paper summarizes two experiments on the relative efficacy of free and guided learning in the acquisition of the maze habit. Manual guidance over the true maze pathway was given to 40 subjects for a period of time equal to that spent during the first run by a control unguided subject. In the first experiment the stylus was guided down the center of the pathway; in the second, against the proper side of the alley. Results indicated little difference between the two groups of the first experiment. The experimental group of the second experiment, however, was consistently superior to the control. Retention tests, given after one week, revealed the fact that both guided groups were superior to their respective controls. A comparison of the two guided groups showed that the second type of guidance gave consistently superior learning scores, but that retention was approximately the same for both.—*R. H. Waters* (Arkansas).

[See also abstracts 7, 33, 50, 68, 111, 147, 210, 269, 450, 469.]

PLANT AND ANIMAL BEHAVIOR

192. *Abbot, C. E.* The tarsal chemical sense of the screw worm fly, *Cochliomyia macellaria* Fab. *Psyche*, 1928, 35, 201-204.—(*Biol. Abst.* V: 20017).

193. *Buytendijk, F. J. J.* Le cerveau et l'intelligence. (The brain and intelligence.) *J. de psychol.*, 1931, 28, 345-371.—The author maintains that we must look for the explanation of neural functions and intelligence in cerebral integration. He finds insupportable the assumption that the intelligent behavior of animals can be explained in terms of the coordination of simple reflexes, and looks for an explanation in terms of "the central activity of parts in mutual relation." After discussing the work of Coghill and Lashley, interpreted as evidence for his theoretical conclusions, the author presents a review of his own experiments on the behavior of white rats. 20 white rats with variously located cerebral lesions of different extent were observed to be lacking in coordination, in ability to respond to configurations in their surroundings, and in normal motivation. In general the operated animals were unable to execute a related series of appropriate movements. In a simple maze where, after running a certain distance along an elevated pathway, the animals were required to descend a ramp leading into the food box, the operated animals showed inferior ability. Their learning curve was consistently higher than that of the normal rats when the criterion was time. In a situation where the rat was required to jump from one platform to another, the platforms being arranged in three steps descending to a food box, the normal rats were superior to the operated animals. The latter animals were indolent, remaining on each platform for long periods before jumping. When the subjects were required to change the direction of running a simple elevated maze the operated animals showed absolute incapacity, while the normal animals soon learned to follow the new route. A simple elevated maze offering a long roundabout route to food was presented and, after the habit had been mastered, a short cut to food was inserted. While the normal rats "behaved in an intelligent manner," choosing the short route immediately, the operated animals habitually chose the long, indirect route. The author concludes that the operated animals had lost their sense of the appropriateness of movements in the direction of a goal. They had lost their "sense of direction." Six figures illustrating apparatus and data.—*N. L. Munn* (Pittsburgh).

194. *Gellermann, L. W.* The double alternation problem: III. The behavior of monkeys in a double alternation box-apparatus. *J. Genet. Psychol.*, 1931, 39, 359-392.—In a previous study (see V: 3395) it was not determined whether monkeys could extend the double alternation of responses beyond the training series; but as this animal's natural response when hungry is not continuous locomotion, in the present study a new apparatus was used that was adapted to the use of the fore limbs, namely two small boxes

placed before the animal to be opened in prescribed order before food appears. All the four monkeys learned the problem *rrllrrll* to the degree of mastery of 10 correct trials in succession. On tests of ability to extend the double alternation type of behavior, all monkeys mastered the successive problem series of 12, 12, 14, and 16 responses—a result far superior to those obtained from rats or raccoons (see III: 1106) but not superior to those from human subjects (see VI: 447). That success was not due to cues from the experimenter or the apparatus itself was proved by controls that were introduced with no effect upon the behavior. These findings suggest that the extension of series in the double alternation problem may require the operation of some symbolic process or some central neural process. The former is indicated by evidence from the temporal maze experiments with humans, and by the character of number-completion tests in intelligence examinations. Attention is also called to the fact that human, monkey, raccoon, and rat subjects are successful in that order in the problems of delayed reaction, double alternation, extension of series, and simple alternation; but the reverse order obtains in the manifestation of direction tendency and in learning to make a correct first turn.—J. F. Dashiell (North Carolina).

195. Gundlach, R. H. A test of "directional sense" in cats and pigeons. *J. Comp. Psychol.*, 1931, 12, 349-356.—The problem of explaining the success of homing animals has resulted more often in extravagant theories than in experimental problems. An analysis of these theories shows that a number of the most prominent involve the notion of some extra-natural sense or instinct that provides the organism with a means of absolute orientation. A technique for testing such a directional sense was developed which consisted of a problem insoluble for any creature that does not have a directional sense. Animals were always released at the north entrance of a plus-sign maze, toward food and nest; but could be entered at either east, south or west. Normal sensory cues were controlled. Three cats, two homing pigeons, and a tumbler pigeon were unable to solve the maze after extensive training.—R. H. Gundlach (Washington).

196. Haney, G. W. The effect of familiarity on maze performance of albino rats. *Univ. Calif. Publ. Psychol.*, 1931, 4, 319-333.—The author wished to determine whether latent learning resulted from allowing the rat free access to a maze, without reward, for 72 hours preceding regular trials. The total time in the maze was divided into four equal periods. Between these periods the animals were fed in the home cages. A T-maze constructed to prevent re-tracing was used for the experimental groups. The control groups were run through a simple rectangular maze similar, except in pattern, to the T-maze. The results show that a certain amount of latent learning does take place during random activity in the maze. "Error differences between rats having

previous general familiarity with the maze and those having none seem to be real differences. The critical ratio of 8.8 is indicative of a significant difference. Under the same conditions the time score differences are not so significant. A critical ratio of but 1.3 was obtained."—N. L. Munn (Pittsburgh).

197. Hannes, F. Über die verschiedenen Arten des "Lernens" der Honigbiene und der Insekten überhaupt. (The different kinds of learning in the honey bee and in the insects in general.) *Zool. Jahrb. Abt. Allgem. Zool. u. Physiol. Tiere*, 1930, 47, 89-150.—(*Biol. Abst. V*: 20008).

198. Hertter, K. Studien über Reizphysiologie und Parasitismus bei Flach- und Entenogeln. (Studies on stimulus physiology and parasitism in leeches.) *Sitzber. ges. Naturforsch. Freunde Berlin*, 1929, 142-184.—(*Biol. Abst. V*: 20009).

199. Hoagland, H., & Crozier, W. J. Geotropic excitation in *Helix*. *J. Gen. Physiol.*, 1931, 15, 15-28.—When the inclined plane upon which *Helix* creeps is rotated, the animal displays a negatively geotropic form of behavior after a measurable latent period or reaction time. The duration of the latent period is a function of the slope of the surface. The relative variability of the response is constant. The relation between reaction time and extent of displacement from symmetrical orientation is found also by tilting the surface without rotation in the animal's plane. On slopes up to 55° the relation between latent period and the sine of the slope is hyperbolic; above this the latent period declines. This change in the curve is not affected by the attachment of moderate loads to the snail's shell, and is probably a consequence of loss of passive stable equilibrium when rotated. When added loads do not too greatly extend the snail's anterior musculature, the latent period is decreased, and proportionately, its σ . These facts are discussed from the point of view of the muscletension theory.—C. H. Graham (Johnson Foundation, Pennsylvania).

200. Hunter, W. S. L'analyse du géotropisme chez le rat blanc. (Analysis of geotropism in the white rat.) *J. de psychol.*, 1931, 28, 456-469.—The author's analysis of the creeping behavior of the white rat on inclined planes does not support Crozier's contention that such behavior can be explained on the basis of muscle tension. Besides failing to verify Crozier's description of the behavior of the legs of the rat, the author finds evidence for two significant components of gravity not mentioned by Crozier. The component perpendicular to the plane ($G \cos \alpha$), which holds the animal to the plane, is supplemented by a component ($G \sin \alpha \sin \theta$) along the line of progression against which the rat pulls, and a component ($G \sin \alpha \cos \theta$) perpendicular to the preceding component and along the slope of the plane, which tends to roll the animal over. The entire situation is also complicated by the influence of such factors as postural reflexes set up by the gravitational components, the strength of the animal, the mechanisms involved in normal forward

progression, slipping and fatigue. These variable factors render impossible an exact mathematical formulation of the behavior. The author points out that "It is incumbent upon further experimentation to determine, by means of accurate recording devices, the precise nature of the factors responsible for variability in the postural reflexes manifested on the inclined plane."—N. L. Munn (Pittsburgh).

201. Hunter, W. S. Lashley on "Cerebral control versus reflexology." *J. Gen. Psychol.*, 1931, 5, 230-234.—A further consideration of Lashley's views on equipotentiality, functional projection areas, mass action, and the integrative action of the nervous system.—H. Cason (Wisconsin).

202. Hunter, W. S. The mechanisms involved in the behavior of white rats on the inclined plane. *J. Gen. Psychol.*, 1931, 5, 295-310.—"The analysis of the rat's behavior on the inclined plane leads me to reject Crozier's theory of muscle-tension in favor of the following: Both the negative direction of the creeping and the angle of orientation, θ , are due to (a) a combination of postural reflexes set up by certain of the components of the gravitational stimulus, (b) the relative strength of the animal, (c) the fact of normal forward progression with its correlate of claws on the anterior of the rat's feet, and (d) such factors as slipping and fatigue." An analysis is made of the gravitational pull effective on the rat when placed on an inclined plane.—H. Cason (Wisconsin).

203. Hunter, W. S., & Nagge, J. W. The white rat and the double alternation temporal maze. *J. Genet. Psychol.*, 1931, 39, 303-319.—Earlier experiments by Hunter failed to demonstrate any ability by the white rat to learn the double alternation problem in the temporal maze. Can positive results be secured by first training the rat to a double alternation response under other conditions (in which differential cues might be obtained) and then gradually modifying the conditions until the temporal maze is set? In the present experiments, rats were successfully trained to make the double alternation response in four boxes placed side by side, being transported from each box to the next after making the correct turn. Some were then able to master this type of response when the number of boxes was reduced to one; and a few blinded animals mastered it when the conditions were reduced to those of the temporal maze. Negative results were in general obtained in tests of the animal's capacity to extend the four responses *llrr* to *llrrll* or *llrrllrr*.—J. F. Dashiell (North Carolina).

204. McNemar, Q., & Stone, C. P. Studies of animal retention: I. Notes on the relearning of a multiple-T maze by albino rats. *J. Genet. Psychol.*, 1931, 39, 135-156.—As by-products of another study data were obtained principally from a multiple-T maze of 12 units and in some cases also from discrimination apparatus and simple and triple problem boxes. 14 groups of rats used on varying tasks were made comparable by computing their savings scores

on relearning as percentages of their original learning scores. Age was found to be an important factor influencing relearning, especially for the older animals; though it is uncertain whether this influence was upon retention or upon learning. Collateral training may have apparent effect upon retention; but the data are inconclusive. Although a relation was observed between amount retained and retention interval, no definite conclusion is possible as to the forgetting curve. The relearning curve for errors resembles the original learning curve for those animals that had not completely mastered the maze; relearning thus appears as a continuation of the learning process. Consistency of individuals from learning to relearning showed an average correlation of $.656 \pm .022$.—J. F. Dashiell (North Carolina).

205. Munn, N. L. An apparatus for testing visual discrimination in animals. *J. Genet. Psychol.*, 1931, 39, 342-358.—An apparatus is described which yields results on pattern vision in hooded and white rats comparable with those obtained by Lashley's jumping technique. Essentially it consists of a choice chamber and two stimulus-bearing doors through which the subject must push its way to reach the food, which is to be found immediately behind. The technique requires less preliminary training than does Lashley's and is adapted to a wider variety of animal forms. It is suggested that the discrepancy between Lashley's results and those on the Yerkes-Watson apparatus is due to the fact that the former guarantees that the animals shall respond to the essential stimuli, whereas on the latter this is not absolutely assured.—J. F. Dashiell (North Carolina).

206. Parschin, A. N. Bedingte Reflexe bei Schildkröten. (Conditioned reflexes of the turtle.) *Pflüg. Arch. f. d. ges. Physiol.*, 1929, 222, 328-333.—(*Biol. Abst.* V: 20010).

207. Rau, P. Additional experiments on the homing of carpenter- and mining-bees. *J. Comp. Psychol.*, 1931, 12, 257-261.—Nearly 100% of mining-bees of mature age can return to their hive after being taken from a mile to two miles away. The younger the bees the less successful seems to be their homing. At middle age only about 50% return to the hive. Carpenter-bees took from one-half hour to 24 hours to return to their hive over a course of two miles. Successive tests with the same bees did not give evidence of a decrease of time with training. Age and experience are important factors in the homing of the bees.—N. L. Munn (Pittsburgh).

208. Shney, A. M. The limits of learning ability in kittens. *Genet. Psychol. Monog.*, 1931, 10, 287-378.—In order to determine the real ability of kittens to learn, the experimenter used in all 82 cats, which number is conspicuously larger than that of most previous studies of the learning ability of cats. An apparatus with an inner food compartment was used and was of such a nature that a serial order of tasks of increasing difficulty could be used. Detailed account is given of living conditions, feeding,

training series and the like. No animal was considered to have mastered a problem until it had solved it perfectly 9 times out of 10. 100 successive failures constituted complete failure. No marked sex differences were found, although individual differences were large. There appeared to be no consistency in the ranking of a kitten on a simple or basic problem and on the complex problem to which it was later assigned. "It appears that the limits of learning for this type of performance were actually found under each arrangement, since the following criteria were employed: (1) 1200 trials or more were given before final failure at any step was recorded, provided the animals kept trying, and (2) 100 trials or more were given after the point at which, through constant failure, an animal became inactive." A summary in tabular form of previous experimental work with cats and a bibliography of 28 titles are appended.—*F. M. Teagarden* (Pittsburgh).

209. Slome, D., & Hogben, L. The time factor in the chromatic responses of *Xenopus laevis*. *Trans. Roy. Soc. South Africa*, 1929, 17, 141-150.—(*Biol. Abst.* V: 20014).

210. Thorval, A. Weitere Experimente über Endolymphbewegungen im Taubenlabyrinth. (Further experiments on endolymph movements in pigeon labyrinths.) *Acta Oto-Laryngol.*, 1931, 16, 384-389.—*M. B. Mitchell* (George School, Pa.).

211. Tinker, M. A. The laboratory course in psychology: II. An animal-learning experiment. *J. Gen. Psychol.*, 1931, 5, 519-521.—*H. Cason* (Wisconsin).

212. Tryon, R. C. Studies in individual differences in maze ability. IV. The constancy of individual differences: correlation between learning and relearning. *J. Comp. Psychol.*, 1931, 12, 303-348.—Experiments were made to determine the degree of constancy of individual differences in maze ability over a long span of the rats' life period. The procedure was to run the rats for twenty trials on a 17-blind T-maze (original learning series), then to interpolate an interval of from six to eight months, after which the rats were run again for thirteen more trials on the same maze (relearning series). Special methods were instituted to hold constant environmental variations before and during the original learning series, but during the interpolated period one group of rats ($N=46$) ran another 20-blind maze, another group ($N=25$), the control, "rested," and the third group ($N=36$) were transported to another building where the relearning series was given. It was desired to determine whether this extensive variation in interpolated circumstances would significantly affect the individual differences manifested in the original series. Individual learning curves over the entire period showed a high degree of parallelism, and the original learning-relearning scores gave correlations of the order .81 to .88. These facts reveal a high constancy of individual differences over the long period. The

variable interpolated conditions seemed not to have affected significantly the rank order of individuals. In view of the rigorous control of environmental conditions preceding and during original learning, the author concludes that the causes of the differences in ability to learn were of hereditary origin.—*R. C. Tryon* (California).

213. Warden, C. J., & Winslow, C. N. The discrimination of absolute versus relative size in the ring dove, *Turtor risorius*. *J. Genet. Psychol.*, 1931, 39, 328-341.—The two-stimulus method of testing discrimination as usually applied tends to favor the use of the relative rather than the absolute type of cue; and in this and a former study (see III: 3988) the technique was modified to favor the absolute aspects of the positive stimulus—by pairing with it one or the other of two negative stimuli respectively of higher and of lower values. Equilateral triangles were used as stimuli in a Yerkes-Watson vision apparatus. Daily records for the two ring doves used are furnished and analyzed. Except for the relatively large number of trials required, the character of the learning process appears to be typical in every respect of experimental work on discrimination habits. The view is set forth that the so-called "relational judgment" is in large part a function of the specific technique of the two-stimulus discrimination method.—*J. F. Dashiell* (North Carolina).

214. Wojtusik, R. J. Über die Raumorientierung bei *Pieris*-Raupen. (On the space orientation of a *Pieris* caterpillar.) *Bull. int. acad. Polonaise sci. et let. cl. sci. math. et nat. ser. B., Sci. nat. II (Zool.)*, 1929, 1/2, 59-66.—(*Biol. Abst.* V: 20016).

[See also abstracts 34, 35, 85, 138, 142, 165.]

EVOLUTION AND HEREDITY

215. Downey, J. Three generations of color-blindness. *J. Gen. Psychol.*, 1931, 5, 459-478.—A study of the defects of color vision in six males and one female of one family group in three generations, with the Ishihara test, Holmgren wool test, Stilling's pseudo-isochromatic plates, and Nagel's test.—*H. Cason* (Wisconsin).

216. Information Service, Milbank Memorial Fund. Urban and rural birth rates. *J. Hered.*, 1931, 22, 58.—Subjects were 69,620 married women of native-white parentage, taken from the 1910 census. Among women 40 to 49 years of age, 16% of those living in cities were childless as compared with 9% of those living in rural districts neighboring the cities. Childless marriages were two and one-half times as common among professional people in the cities as among farm laborers.—*B. S. Burks* (Pasadena City Schools).

217. Mühlmann, W. E. Zur Kritik des genealogischen Denkens. (In criticism of genealogical thinking. *Zsch. f. Völkerpsychol.*, 1931, 7, 311-317.—By genealogical thinking Mühlmann understands the conception that success, or present powers and capacities, are derived from some antecedently exist-

ing center of potencies, without the inclusion of immediately existing conditions. This type of thinking is illustrated by those sociologists who make use of mystical racial powers to explain phenomena.—*J. R. Kantor* (Indiana).

SPECIAL MENTAL CONDITIONS

218. *Adler, A. What life should mean to you.* Boston: Little, Brown, 1931. Pp. 300. \$3.00.—Individual psychology has found that all problems of life are occupational, social, or sexual. All failures are failures because they lack fellow-feeling and social interest. All true meanings of life are defined in terms of usefulness to others. The majority of failures are among those who have suffered in childhood from organic imperfections, from being pampered, or from being neglected. None of these situations compels a mistaken style of life, but these children will need help in revising their approach to problems. In understanding their peculiarities, the analysis of the earliest childhood memory is especially useful. "Since the mind is a unity and the same style of life runs through all its expressions, all of an individual's emotions and thoughts must be consonant with his style of life." "What is missing from psychoanalysis is the very first requisite for a science of psychology—a recognition of the coherence of the personality and of the unity of the individual in all his expressions." This unity provides the explanation of the purpose of dream life. The dream is not a contradiction to waking life, but an attempt to solve the problems confronting the individual. The interpretation of dreams is therefore always individual. Position in the family leaves an indelible stamp upon the style of life; the greatest number of problems are among oldest children, with youngest children second. An Oedipus complex is always an artificial product of mistaken training. The school should provide training in cooperation rather than in competition. The intelligence quotient should not be regarded as fixing a limit to a child's achievements. It can always, except in the feeble-minded, be changed by right methods. "Of all mistakes made in education, the belief in hereditary limits to development is the worst." Criminals are recruited from untrained and unskilled workers, and are of two types: persons who have never experienced fellow-feeling, and those who were pampered children. The cure lies in training for cooperation and social interest. The training of the first four or five years decides the style of life.—*M. P. Montgomery* (Faribault, Minn.).

219. *Andreas-Salomé, L. Zum Typus Weib.* (The feminine type.) *Psychoanal. Bewegung*, 1931, 3, 122-137.—A biographical sketch of Lou Andreas-Salomé precedes her article. The author traces the development of her recognition of social responsibility and of her religious sense to childhood impressions—e. g., buttons to be cherished, money to be shared. In Part II she discusses her theory of the differences between the male and the female char-

acteristics as adolescence approaches, the male being the more consistent. From this period on there follows a long struggle by the woman for emancipation from the male characteristics in her make-up, with its determining influence upon her personality development. The author gives a Freudian setting to her interpretation of the life development of each of the sexes.—*A. B. Herrig* (Michigan Central State Teachers College).

220. [Anon.] A discussion on the prevention and treatment of drug addiction. *Brit. J. Inebriety*, 1931, 29, 13-19.—(*Soc. Sci. Abst.* III: 18253).

221. [Anon.] Ferdinand Bruckner über Psychoanalyse. (Ferdinand Bruckner on psychoanalysis.) *Psychoanal. Bewegung*, 1931, 3, 184-186.—Bruckner has made several contributions to literature under the pseudonym Theodore Tagger. His recent one under his own name, a thoughtful essay on psychoanalysis in the periodical *Die Literatur*, reveals the source of his power. He is himself a psychoanalyst. The article gives a short estimate of the value of this field for all who wish to enter the field of character delineation.—*A. B. Herrig* (Michigan Central State Teachers College).

222. [Anon.] Freund und die moderne Literatur. (Freud and modern literature.) *Psychoanal. Bewegung*, 1931, 3, 186-188.—Two essays have appeared in the Stockholm *Dagens Nyheter* by Sten Seländer dealing with the influence of psychoanalysis on modern literature in all lands. The article cites authors and their works that show this influence.—*A. B. Herrig* (Michigan Central State Teachers College).

223. [Anon.] Psychoanalyse und Völkerpsychologie. (Psychoanalysis and ethnopsychology.) *Psychoanal. Bewegung*, 1931, 3, 189-190.—Kronfeld in his recent *Perspective on Psychotherapy* attempts to find the contribution that ethnopsychology may have to offer to mental healing. He comments on the attitude of each field toward the other, and sees the need for psychoanalysis to sense the values of the other field in making its interpretations.—*A. B. Herrig* (Michigan Central State Teachers College).

224. *Blum, E. Zur Symbolik des Raben.* (The symbolism of the raven.) *Psychoanal. Bewegung*, 1931, 3, 359-368.—An attempt is made to trace the symbolism that is associated with the raven as a bird of ill omen. From many compositions of children which were available to the author, he reaches the conclusion that this association exists very early in life. A number of cases are analyzed and evidence is given that there are erotic and anal associations.—*A. B. Herrig* (Michigan Central State Teachers College).

225. *Byars, R. L. New psychology and humanism; a mind science; a new interpretation of the powers that be for human welfare.* Columbia, Mo.: New Psychology Publ. Co., 1931. Pp. 63. \$35.—(Not seen).

226. *Carver, A. E. The psychology of the alcoholic.* *Brit. J. Med. Psychol.*, 1931, 11, 117-124.—

Analysis of the alcoholic reveals him to be a superficially pleasant but highly sensitive individual who may either be overtly shy or cover shyness with a hail-fellow-well-met mannerism. He attempts to compensate for a feeling of inferiority by boastful con-fabulation. He may not excuse addiction to alcohol, but declines responsibility and blames heredity, companionship, or stress in domestic or business life. The euphoria produced by alcohol is pleasurable, but the flight from reality, if pushed too far, proceeds towards infantile levels, and the return of the repressed from these levels causes great anxiety and antisocial behavior.—E. R. Hilgard (Yale).

227. Critchley, M. Some forms of drug addiction: mesecism. *Brit. J. Inebriety*, 1931, 28, 99-103.—(*Soc. Sci. Abst.* III: 18234).

228. Crookshank, F. G. Individual psychology and the bases of science. *Psyche*, 1931, 11, 25-43.—Individual psychology may be considered a scientific discipline, for its generalizations are from experiences which may be regarded as experiments. The same is true of medical science.—T. R. Garth (Denver).

229. Edgerton, J. A. Invading the invisible. Washington, D. C.: Author, 1931. Pp. 361. \$2.50.—(Not seen).

230. Endres, F. C. Vom Wesen des Symbols. (The nature of the symbol.) *Psychol. Rundschau*, 1931, 3, 146-150.—This is the fourth and last article in the series. An analysis is made of the factors that are the determinants of the symbol. Religious symbols and the tabu attitude toward them are commented on. The author calls attention to the question of the value of the symbol as a therapeutic agency and sees a possible instrument in the hands of the skilled.—A. B. Herrig (Michigan Central State Teachers College).

231. Farnsworth, P. R., & Misumi, I. Further data on suggestion in pictures. *Amer. J. Psychol.*, 1931, 43, 632.—Two groups of students were presented with prints of pictures, in one case with the name of a famous, in the other with that of a less well-known, artist attached. It is found that the name of the famous artist has considerable potency in determining the rating given, although the differences are not completely reliable statistically.—D. E. Johannsen (Skidmore).

232. Groddeck, G. Das Zwiesgeschlecht des Menschen. (Bisexuality in human beings.) *Psychoanal. Bewegung*, 1931, 3, 166-172.—Attention is called to the findings of psychoanalysis—man is always a child, and he is bisexual. Every investigator of the subconscious comes upon feminine urges in the male and vice versa. He regards the Hebrew custom of circumcision as evidence of the male urge for the feminine. He traces through myths and religions this concept of bisexuality, and sees in the gender given to words designating parts of the body a further indication of recognition of this fact.—A. B. Herrig (Michigan Central State Teachers College).

233. Huth, A. Persönlichkeitsbegutachtung in der pädagogischen Praxis. (The estimation of personality in pedagogical practice.) *Vjsch. f. Jugendl.*, 1931, 1, 202-207.—There are two fundamental and exact methods of studying personality: systematic and prolonged observation, and psychological tests. The latter show in a comparatively short time and with reasonable certainty the present status of different functions and abilities; but observation is necessary to determine the origin of personality traits, to evaluate them, and to penetrate into the psychic life. Pedagogic psychology deepens, systematizes, and makes objective the intuitive estimates of pupils which every teacher makes. For school purposes, it is desirable to organize the study of the personality around a few main points, thus avoiding the extremes of wandering description and rigid questionnaires. The author gives a form which can be adapted, if desired, to numerical evaluation.—M. E. Morse (Catonsville, Md.).

234. Jones, A. O. Is there a time sense? *Psyche*, 1930, 11, 82-85.—The writer says he can tell the time of day without looking at any timepiece. He has always possessed this faculty, which operates regardless of the time of day, even in the night upon awakening from sleep.—T. R. Garth (Denver).

235. Jones, E. Das Problem Paul Morphy. (The problem of Paul Morphy.) *Psychoanal. Bewegung*, 1931, 3, 193-216.—The case of Paul Morphy, the world's greatest chess player, is cited, and an attempt made to ascertain what relationship may have existed between his extraordinary ability, manifested in early childhood, and his early death as a paranoiac. After giving the history of the game, the author describes the method of the master, then the personality traits which later broke in the paranoiac state from which early death released him. The author believes that unusual accomplishment arises as a compensation for inferiority feelings, a type of sublimation. When this sublimation breaks down, the mental balance is lost.—A. B. Herrig (Michigan Central State Teachers College).

236. Jung, C. G. Der archaische Mensch. (Archaic man.) *Europ. Rev.*, 1931, 7, 182-203.—(*Soc. Sci. Abst.* III: 16635).

237. Lacombe, R.-E. Sur l'intérêt de la tentative de Freud. (Concerning the interest in Freud's attempt.) *J. de psychol.*, 1931, 28, 429-454.—The author sets himself the task of explaining why the work of Freud has excited such widespread interest among psychologists and the general public. One reason for this interest is that Freudian psychology has filled a need scarcely recognized by the more firmly established psychology. Freud's results have been fertile because he has attacked virgin soil. The methods, however, need constant evaluation. There is danger in moving too rapidly. The counter-reaction to Freudian psychology on the part of many psychologists is a reaction against the excessive enthusiasm of its disciples.—N. L. Munn (Pittsburgh).

238. Laird, D. A. *Why we don't like people.* New York: Mohawk Press, 1931. Pp. xvii + 166. \$2.00.—"A brief practical presentation of what is actually found by experimental methods in studying human qualities other than intelligence and sensory functions. It deals principally with the responses which these qualities arouse in those about us." The author analyzes various personality make-ups and traits which help or hinder social adjustment, and suggests means of altering unpleasant personality traits.—J. C. Spence (Clark).

239. Leonard, G. O. *My life in two worlds.* London: Cassell, 1931. Pp. ix + 300. 7/6.—Autobiographical notes written by a well-known medium. Oliver Lodge contributes an appreciative preface.—F. C. Bartlett (Cambridge, England).

240. Lyttelton, E. S. B. *Our superconscious mind.* New York: Appleton, 1931. Pp. 264. \$2.50.—(Not seen).

241. Marini, P. *L'enigme de la destinée révélée par la main. Traité pratique de chiromancie avec une étude sur les stigmates astrales.* (The enigma of destiny revealed by the hand. Practical treatise on chiromancy with a study on astral stigmata.) Turin: Gossi, 1931.—M. Ponso (Turin).

242. Märker, F. *Autokraten und Demokraten. Charakterologische Bildnisse.* (Autoerats and democrats. Characterological portraits.) Zürich: Rentsch, 1931. Pp. 117. M. 5.40.—These portraits are an application of the characterological system built up by Märker in his book *Typen*. They attempt to show the accuracy of the knowledge imparted therein. They also show how one must apply theories; how one power becomes weakened or strengthened or is changed by another, and how the personality comes into existence as an interaction of its various properties. There are more than sixty portraits collected in this volume. Märker leads the reader from the study of Goethe and Schiller to the art of character reading and its problem. Then there are portraits of Kleist, Goya, Eichendorff, Mareés, Anderson, Tolstoi, and Dostoevski. He works out, in particular, the opposition of the eccentricities which a man keeps to himself and those shown toward the outer world. The motif of the following section, comprising studies of Napoleon, Frederick the Great, Bismarck, vom Stein, Ebert, Hindenburg, and Ludendorff, is to establish which forms of the head and which traits are characteristic for the man whose accomplishments are wordly, which for the conqueror, which for the man who makes a sure life for himself by his adaptability. In the next section the theme varies in the case of the enterprisers, Rockefeller, Ford and Ballin, and the diplomats, Machiavelli, Metternich, Richelieu, and Stresemann.—F. Märker (Berlin-Schlachtensee).

243. Money-Kyrle, R. *A psychologist's Utopia.* *Psyche*, 1931, 11, 48-69.—Aggressiveness is a reaction to frustration, especially to sexual frustration. A case in point is the Oedipus complex, which may give

rise to social discontent. While some escape from the Oedipus complex, and all have had it, some remain fixed in it. To decrease sexual tabus would make possible decrease of fixation and regression. This would reduce the tendencies to aggression, both as to intensity and number. A "new and better sexual ethic" is needed for the future of civilization.—T. R. Garth (Denver).

244. Morf, G. *Aus der psychologischen beratungspraxis.* (From the practice of psychological counsel.) *Psychol. Rundschau*, 1931, 3, 181-184.—A case is cited of a young man of restless disposition, always seeking new places, loving the extreme, the unrestrained. He is typical of a class, an extreme case of a characteristic which all mankind possesses. The search to find the self, to bring it into accord with all life, is the great urge, and yet it is not recognized and often hides from itself because fearful of self-recognition. The help of another is sometimes necessary, and the highest qualification of such a leader is again self-knowledge.—A. B. Herrig (Michigan Central State Teachers College).

245. Moxon, C. *Freud's denial of religion.* *Brit. J. Med. Psychol.*, 1931, 11, 150-157.—The author explains Freud's denial of religion on the basis of Rank's position that Freud is thereby denying his own will conflict. The conflict is between the self-will and the social will. The denial of his own conflicting will tendencies results in Freud's failure to distinguish between the good and bad in religion.—E. R. Hilgard (Yale).

246. Pfister, O. *Ein Hamlet am Schachbrett.* (A Hamlet at the chess-board.) *Psychoanal. Bewegung*, 1931, 3, 217-222.—A case is here cited of a chess-player, intelligent, a master of the game, yet continually failing in his play. The author holds that he throws his life conflict into the game in symbolism. The player's analysis of his thoughts and urges while playing revealed this fact. Some improvement in his play was shown after the causes were revealed to him.—A. B. Herrig (Michigan Central State Teachers College).

247. Pfister, O. *Aus der Analyse eines Buddhisten.* (From the analysis of a Buddhist.) *Psychoanal. Bewegung*, 1931, 3, 307-328.—The author has had opportunity to examine the record of a psychoanalysis of a highly intelligent Buddhist who acquired fears of sleep, of illness, and of death, with accompanying hysterical symptoms. The family history of the case is cited, and the progress of the neurosis reviewed. In the acceptance of Buddhism the author sees a flight from the conflicts of life into quiet. He claims that this case is typical of the appeal that Buddhism makes.—A. B. Herrig (Michigan Central State Teachers College).

248. Piccoli, G. A. *Il comico, l'umore e la fantasia.* (The comic, humor and fantasy.) Turin: Bocca. Pp. 312. Lire 21.—This book, rich in theoretical reflection, contains a detailed analysis of the phenomena mentioned in the title, which are consid-

ered by the author in regard not only to their psychological, but also to their social and esthetic significance.—A. Angyal (Turin).

249. Sarasin, P. Die Psychoanalyse in der Schweiz. (Psychoanalysis in Switzerland.) *Psychoanal. Bewegung*, 1931, 3, 289-291.—Comments on the enthusiasm with which psychoanalysis was taken up in Switzerland, and the many contributions that have been made to periodicals by Swiss authors. The International Psychoanalytical Conference has its twelfth International Congress this year in Interlaken.—A. B. Herrig (Michigan Central State Teachers College).

250. Sch., F. Geld und Neurose. (Money and neuroses.) *Psychoanal. Bewegung*, 1931, 3, 173-184.—In a book recently written by Odier under the title *L'Argent et les Névrosés* there is set forth the large place which money occupies as symbolism in neuro-pathic cases, and probably also in persons not mentally ill. A conflict reveals itself between the urge for money of the subconscious (the "It") and the cultivated, higher, social self (the "I"). This conflict between the urges to give and to take accounts for many behavior reactions during the whole course of life.—A. B. Herrig (Michigan Central State Teachers College).

251. Schottländer, F. Henri Bergsons Gedächtnistheorie im Lichte der Psychoanalyse. (Henri Bergson's memory theory in the light of psychoanalysis.) *Psychoanal. Bewegung*, 1931, 3, 250-273.—The lack of interest that philosophy and psychoanalysis have shown in each other is unfortunate. The author attempts to show that each has value for the other. There are similar points of interest in Bergson's thought-system and Freud's psychoanalysis. Bergson recognizes two of the Freudian fundamentals, the unconscious and repression, but fails to recognize the place of sexuality. Psychoanalysis begins where Bergson's philosophical construction ends. The author discusses the place that the freedom of the will theory holds and the relationship of conscience and consciousness.—A. B. Herrig (Michigan Central State Teachers College).

252. Sigg-Boeddinghaus, —. Die praktische Verwendbarkeit der Traumanalyse von C. G. Jung. (The practical application of the dream-analysis of C. G. Jung.) *Psychol. Rundschau*, 1931, 3, 141-146.—Leibnitz two hundred years ago spoke of the unconscious mental field. Kant postulated it, but it was left for Freud to discover a way to analyze it and to reveal its factors to the conscious self as a means for cure of psychoses. Jung stresses the need of physician and patient being agreed on a dream interpretation, better that the patient reach his own interpretation of it. Above all, the physician may not be dogmatic; his theory must be flexible. Jung says we have over-stressed the importance of single dreams. He suggests a wiser procedure.—A. B. Herrig (Michigan Central State Teachers College).

253. Sinzig, H. Tiefenpsychologie in der Berufsberatung. (Depth psychology in vocational guidance.) *Indus. Psychotechn.*, 1930, 7, 254-257.—Three cases are cited to illustrate the need for psychoanalytic methods in vocational counseling. Developments in this direction in the Cologne Psychological Institute are mentioned.—A. W. Kornhauser (Chicago).

254. Stephen, A. On defining psycho-analysis. *Brit. J. Med. Psychol.*, 1931, 11, 101-116.—By criticizing the kind of description which a professional psychologist might give of an analysis, the author shows what is essential and what is non-essential. The most essential characteristics of psychoanalytic treatment are found in the use made of free association and the transference. The patient gives free play to his fantasies, and is finally taken behind the scenes to find out of what stuff his fantastic creations are made.—E. R. Hilgard (Yale).

255. Sterba, R. Der Widerstand gegen die Symbolübersetzung. (Resistance to symbol interpretation.) *Psychoanal. Bewegung*, 1931, 3, 246-249.—The symbol reveals itself in the dream and in folk-lore. It is quite common to find resistance to the interpretation of dreams as symbols, while the symbolism of folk-lore is readily accepted. The author tries to account for this. Social custom censors frankness in sex matters, but the urge to express oneself relative to them is present. It appears in the joke and in folk-lore. Man resists the dream because it is a non-pleasurable experience; thus he fails to understand its symbolism. He resents its implications, which are too personal. He can be led to confidence in the symbolism of the dream by revealing to him parallelisms with folk-lore symbols.—A. B. Herrig (Michigan Central State Teachers College).

256. Symonds, P. M. Needed research in diagnosing personality and conduct. *J. Educ. Res.*, 1931, 24, 175-187.—After listing fourteen main types of problems which need investigation in this field, the author lists 205 specific problems for immediate investigation. These include observational problems, rating methods, questionnaires regarding adjustment, attitudes and interests, tests of conduct knowledge and of performance, physiological measures of emotion, interviewing, external signs of conduct and the measurement of environment.—S. W. Fernberger (Pennsylvania).

257. Weber, H. Some points of disagreement with Freudian practice and theory. *Psyche*, 1931, 12, 23-43.—While Freudian concepts may appear strange to the uninitiated, a close examination will justify the claim that they are based on facts. The writer points to various instances of inconsistency on the part of Freud and to a certain disposition to pessimism. These are likely to produce "destruction rather than construction."—T. R. Garth (Denver).

258. Weiss, E. Elementi di psicoanalisi. (Elements of psychoanalysis.) Milan: Hoepli, 1931. Pp.

242.—In this book, the foreword of which was written by Freud, the author has combined five lectures dealing with the fundamental problems of psychoanalysis. The following very important questions are discussed: the concepts of the id and of unconscious inhibition; symbolism; an introduction to the idea of the super-ego; the origin of the super-ego and of social and religious feeling; the theory of instincts; psychic systems; the foundations of psychopathology and psychoanalytical theory.—A. Angyal (Turin).

259. Wittels, F. *Zur Urgeschichte der Libido*. (Early history of the libido.) *Psychoanal. Bewegung*, 1931, 3, 223-246.—The author traces at length the development of man from the lower animal types, including physical changes and mental adaptations. Special emphasis is given to the sex life of man and woman, their relationship to each other in various periods of history, and the appearance of love in the human race. Eons of time passed in the development of the cultures of today, and the libido reveals traces of the periods passed through.—A. B. Herrig (Michigan Central State Teachers College).

260. Woodward, J. W. Tentative applications of the experimental method in psycho-analytic procedure. The interpretability of dreams. *Brit. J. Med. Psychol.*, 1931, 11, 125-149.—By recording completely the dialogue between analyst and patient, the author hopes to submit dream analysis to experimental interpretation. Such charges, for example, as that the analyst imposes symbols on the patient, may be refuted by studying the record. A case is presented in dialogue, as reconstructed from memory by the analyst and patient.—E. R. Hilgard (Yale).

261. Wright, M. B. Shyness. *Psyche*, 1930, 11, 32-42.—It is interesting to know what some shy men of fame have had to say of themselves. Compton Leith wrote because he could not speak out in a group. He was most shy in the presence of women, whom he considered most immune from shyness. Rousseau wrote fully on the subject. From the standpoint of self-analysis his *Confessions* and some other writing may be considered as containing all that can be said on the subject. He does more than Leith; he justifies his withdrawal and writes in justification thereof, recommending it to others—in fact he becomes the social rebel. As to another literary character, the French author Stendhal, his timidity brings about a totally different adjustment from that of Rousseau. He never justified his timidity, but was always trying by various devices to overcome it. He endeavored to become a great lover in order to overcome his shyness, not because of any strong tendency in that direction.—T. R. Garth (Denver).

262. Wright, M. B. Animal magnetism. *Psyche*, 1930, 11, 45-56.—The author proposes to give a brief historical account of animal magnetism, without however going back into remote antiquity. He feels sure there is more than vain imaginings in the theories of

the magnetists both ancient and modern.—T. R. Garth (Denver).

263. Young, P. C. A general review of the literature on hypnotism and suggestion. *Psychol. Bull.*, 1931, 28, 367-391.—A review of 135 references, giving much attention to experimentation in psychological laboratories, to experimentation in physiological laboratories, and to clinical medical uses of hypnotism and suggestion. "The revival of hypnotism that Janet prophesied is coming" in Germany and the rest of northern Europe and in America.—J. F. Dashiell (North Carolina).

264. Zullinger, H. *Teufelsdröck, die Arznei*. (Asafoetida, the medicine.) *Psychoanal. Bewegung*, 1931, 3, 340-358.—The use of asafoetida as an antidote and a sleeping potion is traced. The name *theriak* (*Teufelsdröck* = devil's dung) has superstitions associations. The author traces these also to other drugs and to the use of medicines in general before science threw light on their efficacy.—A. B. Herrig (Michigan Central State Teachers College).

265. Zutt, J. *Sobre el soñar despierto*. *Arch. de neurobiol.*, 1931, 11, 5-22.—A discussion concerning the day dream and its relation to psychoneurotic states. The psychological process on which the reality of a day dream is based is the adoption of an "inner (psychic) attitude" which becomes adjusted to a situation in which a desired object is represented as obtained. By this means the reality of an unreal situation is made possible. The organic and manic-depressive psychoses are not dependent on the concept of an "inner (psychic) attitude," while in the schizophrenic psychoses the basic disturbance is an alteration of the relations between the "inner attitude" and the ego.—C. C. Neet (Clark).

[See also abstracts 4, 63, 148, 179, 268.]

NERVOUS AND MENTAL DISORDERS

266. Ameghino, A., & González, M. E. *Locura e inmigración*. (Mental disease and immigration.) *Rev. de crim. psiquiat. y med. leg.*, 1931, 18, 154-164.—(*Soc. Sci. Abst.* III: 18128).

267. [Anon.] Psychiatric education. *Science*, 1931, 74, 431-432.—Announcing the establishment of a new division of the National Committee for Mental Hygiene for psychiatric education, under the directorship of Ralph A. Noble.—R. R. Willoughby (Clark).

268. Bartemeier, L. H. The neurotic character as a new psychoanalytic concept. *Amer. J. Orthopsychiat.*, 1931, 1, 512-520.—A discussion of the constitutional psychopath from the psychoanalytic viewpoint. A case history is analyzed.—H. Peak (Yale).

269. Bellincioni, R. *Riflessi di automatismo spinale utilizzati intenzionalmente da una paraplegica*. (Automatic spinal reflexes utilized intentionally by a paraplegic.) *Rass. di stud. psichiat.*, 1931, 20, 57-61.—Description of a case of spastic

paraplegia in a woman who learned to elicit, by appropriate stimuli, certain automatic spinal reflexes, thus obtaining movement of the legs.—*G. C. Ferrari* (Bologna).

270. Bufo, E. *International Übersicht über den Stand der Familienpflege*. (An international review of the status of family care.) *Zsch. f. psych. Hygiene*, 1931, 4, 98-110.—The author is strongly in favor of increased utilization of family care, by which he understands the placing of mental patients in agricultural families under supervision from an institution. The countries making greatest use of this system are Denmark, Scotland, Germany, Switzerland and Hungary; those employing it very little or not at all are France, England, Wales, and the United States. These findings are based upon answers to a questionnaire sent out by the author.—*M. F. Mehling* (Cleveland, Ohio).

271. Callewaert, H. *La crampe des écrivains. Influence de techniques professionnelles défectueuses*. (Writer's cramp. Influence of defective professional technique.) *J. de neur. et de psychiat.*, 1930, 30, 814-822.—The author believes that writer's cramp is a hyperkinesia and that a certain degree of paratonia caused by a slight defect of pyramidal inhibition as defined by Dupré is a necessary causal condition. The incapacity of relaxation can be cured by the proper reeducation of the control of arm and finger muscles, the method of which is described in detail. In cases where a writing difficulty is part of the symptomatology of organic defects, the progress depends on the severity of the peripheral or central lesion. The "essential" writer's cramp is frequently associated with an emotional make-up.—*H. Sys* (New York City).

272. Cohen, J. T., & Anderson, J. E. Note on the eruption of the permanent teeth in a group of subnormal children, including an observation on the frequency of congenitally missing laterals. *J. Genet. Psychol.*, 1931, 39, 279-284.—Examinations of 2848 normal and 218 subnormal children, of chronological ages 5 to 15 years, revealed that: the subnormals have fewer permanent teeth at any age; they show permanent laterals more often congenitally missing; among children with congenitally missing laterals, the remaining teeth erupt later, especially in the subnormals.—*J. F. Dashiell* (North Carolina).

273. Culpin, M. The conception of nervous disorder. *Brit. J. Med. Psychol.*, 1931, 11, 89-100.—The history is given of the attitudes which from the time of Hippocrates have led to the neurological or pseudo-neurological language used in describing such clinical problems as hysteria. The belief in mechanical forces as responsible for psychological troubles depends on the fundamental tendency of mankind to externalize his internal conflicts and difficulties.—*E. R. Hilgard* (Yale).

274. Dederding, D. Our Menière treatment (principles and results). *Acta Oto-Laryngol.*, 1931, 16, 404-415.—Menière has many symptoms as irregular

as those of the acoustic and vestibular phenomena. Among these are headache, vasomotor rhinitis, chilliness, congestions, rheumatism, gastrointestinal disturbances and nervous phenomena such as fatigue, irritability, depression, insomnia, and memory defects. All symptoms seem to depend on abnormal water metabolism. Treatment by aid of diuretics was quite successful, especially when salyrgan was used. However, this treatment was discontinued because it sometimes had a deleterious effect. The more recent treatment has been by restricting the supply of fluid.—*M. B. Mitchell* (George School, Pa.).

275. Dederding, D. The effect of quicksilver charging on bone conduction in Menière patients. *Acta Oto-Laryngol.*, 1931, 16, 449-458.—Quicksilver charging has been used to show that in the majority of Menière patients there is an affection of sound conduction.—*M. B. Mitchell* (George School, Pa.).

276. Divry, —, & Moreau, —. *Les angionévroses. Discussion*. (Angioneuroses. Discussion.) *J. de neur. et de psychiat.*, 1930, 30, 838-841.—This is a discussion of the article on the nature of angioneuroses by the above authors which appeared in a previous issue of the same journal. Laignel-Lavastine remarks that the exsudative angioneurotic diathesis corresponds to his constitutional vagotony, in which the same vaso-motor ataxia is found. Angioneuroses are often characterized by especially large oscillations of neuro-vegetative excitability rather than by the predominance of vaso-constrictive or vaso-dilatory factors.—*H. Sys* (New York City).

277. D'Ormea, A., & Broggi, E. *Indicazioni ed importanza della psicoterapia vaccinnica nella cura della paralisi progressiva*. (Indications and importance of vaccinic psychotherapy in the cure of progressive paralysis.) *Rass. di stud. psychiat.*, 1931, 20, 153-187.—*G. C. Ferrari* (Bologna).

278. Durando, P. *Considerazioni sull'atetosi*. (Considerations on athetosis.) *Rass. di stud. psychiat.*, 1931, 20, 279-289.—The author deals with athetosis, referring to the extremely pathogenic cases, and draws from them some conclusions regarding his own case.—*G. C. Ferrari* (Bologna).

279. Economo, C. v. *Encephalitis lethargica: its sequelae and treatment*. London: Oxford Univ. Press, 1931. Pp. xvi + 200. 18/.—This is a translation of von Economo's standard work by K. O. Newman. A somewhat brief section is added concerning some of the psychological complications of encephalitis lethargica, and the translator is responsible for notes and references to English work on the subject.—*F. C. Bartlett* (Cambridge, England).

280. Fagley, R. B. The value of occupational therapy in treatment of mental cases. *Occup. Therap. & Rehab.*, 1931, 10, 291-298.—The general program involves occupational work and also habit training in connection with such things as personal hygiene. The program usually involves introducing the patient to simple crafts and then working up to more advanced forms. If he is on the road to re-

covery this work should be of a sort that will enable him to make a better occupational adjustment when he gets out. Therapy with orthopedic cases is much easier than with mental cases. The patient will not want to do something because it is good for him and will help him to get better, because from his point of view there is nothing wrong with him anyway. With dementia praecox cases it is desirable to focus interest on affairs of every-day life, substituting occupational therapy for mere fantasy. Sometimes the collaboration of several patients in a project is helpful. Some paranoid types may be employed in a useful manner about the hospital. The manic type may have his activity directed toward a constructive end—perhaps picking hair from mattresses or tearing strips for rugs, rather than destroying other material. With the depressed cases the therapy should begin with very simple types of work and continue for brief periods. The melancholic is usually too agitated to cooperate very well in occupational therapy.—H. E. Burr (Ohio State).

281. Fattovich, G. Osservazioni capillaroscopiche nei ragazzi anormali psichici. (Capillaroscopic observations on mentally abnormal children.) *Rass. di stud. psichiat.*, 1931, 20, 242-256.—The author has carried out capillaroscopic researches on 113 mentally abnormal boys, and although a corresponding parallel has not been found between the arrest of physical development and the capillaroscopic image, he has shown a preponderance of strangely formed capillaries and of capillary forms checked in ontogenetic development in comparison with those in the form of a hairpin, which are found in normal subjects. He has also noted in the mentally abnormal, along with somatic dysendocrine tendencies, the presence of modifications of the peri-capillary stroma and of the sub-capillary plexus.—G. C. Ferrari (Bologna).

282. Georgi, F. Jahresversammlung des deutschen Vereins für Psychiatrie in Breslau vom 10/11. IV. 1931. (Annual meeting of the German Psychiatric Society, Breslau, April 10-11, 1931.) *Zentbl. f. Psychotherap.*, 1931, 4, 529-533.—One of the main topics of discussion was dementia paralytica. Jossmann (Berlin) gave a critical report on 2200 cases subjected to malarial therapy, with 23% full remissions, 17% incomplete remissions, 25% without relief, and 33% deaths. K. Schneider took up the social problems caused by patients in full remission—whether they should be allowed to engage in occupations involving the safety of other persons, and the question of marriage. Other papers were concerned with the prognostic and histological aspects of the disease. Four other subjects received special consideration: (1) phonetic methods in psychiatric study through the use of reproducible transcriptions of the patient's utterances (Zwirner); (2) disturbances of the time sense in organic brain lesions (Guttmann), which in Korsakow's disease, at least, the author refers to changes in spontaneity; (3) the interpretation of schizophrenic disturbances in thought and

speech as functional degenerations (Krisch); (4) repeated accidents and their conditioning by personality traits (Alexandra Adler of Vienna). The last author examined psychologically 100 laborers who had sustained an average of 5 accidents each, and found that all the men showed abnormalities in their life situations and a psychological maladaptation to their work, although not a lack of technical skill. Many were neurotic. A series of persons who had never had accidents served as a control.—M. E. Morse (Catonsville, Md.).

283. Gianelli, V. Sui tentativi di suicidio nel dementi. (On attempted suicide in insanity.) *Rass. di stud. psichiat.*, 1931, 20, 257-289.—In examining the various psychic moments, illustrated in the present case, in which suicidal tendencies are manifest, the author tries to show how fundamentally wrong it is to speak of a unique and classic suicidal type in dementia praecox. The tendency can be manifested in the initial as well as in the final phase of the process of insanity, revealing peculiar characteristics of the different stages through which the breaking up of the personality passes. This very often happens in a logical manner and through an orderly process of reciprocal reactions between the various activities of the mind; thus it is shown that the methods of formation and breaking up of personality are identical.—G. C. Ferrari (Bologna).

284. Grimaldi, —. Demenza precoce ed impedimenti. (Dementia praecox and impediments.) *Rass. di stud. psichiat.*, 1931, 20, 125-152.—The author, continuing the investigation reported in a previous article, illustrates two clinical cases of interest due to the fact that the disorders of the motor system presented, of an uncommon and dominant type, may constitute a complex corroborating the assumption that "impediment" is the fundamental factor in impairments of the psychic activity of dementia praecox and of specific dissociation.—G. C. Ferrari (Bologna).

285. Hagelstam, J. Ein Fall von extrapyramidalem Symptomkomplex mit Torsionsdystonie. (A case of an extra-pyramidal symptom complex with torsion dystonia.) *Acta psychiat. et neur.*, 1931, 6, 295-299.—M. B. Mitchell (George School, Pa.).

286. Halberstadt, —. Etude clinique de la démence mélancolique présénile. (A clinical study of presenile melancholic dementia.) *Ann. méd.-psychol.*, 1930, 88, 409-425.—The author emphasizes the autonomic character of the different forms of presenile melancholia. He reviews the literature on the subject and then gives detailed observations on three cases (extending over periods of seven, five, and four and a half years) which illustrate the special form which he calls presenile melancholic dementia. The specific symptoms are summarized, such as the rapidity of development, the slight importance of sensory disorders, the characteristic mannerisms which develop as the intellectual faculties become seriously impaired, etc. The predominant syndrome was found to be a general weakening of the intellect terminating

in a profound dementia, with the conservation, however, of traces of the initial affective melancholic condition. The essential characteristic was one of evolution in that this disturbance begins without any special antecedents or prodromes around the age of 40 to 45 and evolves at a rapid rate towards a definite and irremediable dementia. Accordingly, the author thinks that presenile melancholic dementia merits individualization, being clearly distinguishable from arteriosclerotic dementia and other forms of melancholia and schizophrenia. There is a bibliography of 18 titles.—*A. B. Hunter* (Clark).

287. Johnstone, E. R. Report of the director, Training School, Vineland, N. J. *Tr. School Bull.*, 1931, 28, 94-100.—The 43rd annual report of the school. In order to help and train and enable every child to live happily the school has a laboratory to study, a hospital to correct physical conditions, a school to train, a dietary and household department to give the comforts of home. The children have found happiness. The school has also helped in fields of science, welfare, education and agriculture. The White House conference is mentioned, especially its program for the handicapped. The program calls for (1) early identification of all below normal, (2) therapeutic prevention, (3) supervision of parole, (4) prevention of reproduction, (5) research. The report of a legacy for \$20,000 for the Josephine DeMott Cottage was made. The 25th anniversary of the opening of the laboratory at Vineland, when Goddard first came, will be celebrated next fall.—*E. M. Achilles* (Columbia).

288. Kortenhorst, A. T. Die Psychopathengesetzgebung und ihre Durchführung in den Niederlanden. (Legislation concerning psychopaths and its execution in the Netherlands.) *Zsch. f. psych. Hygiene*, 1931, 4, 110-122.—Under the new penal law of 1928 (No. 386) a psychiatrist must be associated with the judge in cases involving criminal insanity. All cases of mental retardation or temporary disturbance must be institutionalized for not more than one year, after which further disposition is in the hands of a special commission. All mental anomalies are covered by the law, and careful follow-up is recommended.—*M. F. Mehling* (Cleveland, Ohio).

289. Leikvam, J. Beror schizofreni på en sykkelig organisk prosess? (Is schizophrenia due to an impaired organic process?) *Tidsskr. f. d. norske lægeforening*, 1931, 51, 783-795.—A general discussion of theories concerning schizophrenia.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

290. Ley, A. Sur la dysorthographie d'évolution. (On developmental dysorthography.) *J. de neur. et de psychiat.*, 1930, 30, 823-826.—The author discusses the difficulties in spelling encountered by some people regardless of their general level of intelligence. This disorder does not seem to be due to a special form of verbal blindness or to a visual defect, nor does it seem to have its basis in an impairment of the auditory or motor memory or the general memory. Observation of subjects having

marked difficulties in the acquisition of orthography lead the author to consider the orthographic function as a specific synthesis, the hierarchic level of which surpasses ontogenically those of the sensorial, visual, auditory or motor syntheses.—*H. Sys* (New York City).

291. MacKenzie, W. P. Art as occupational therapy. *Occup. Therap. & Rehab.*, 1931, 10, 307-315.—Case study of a woman with a long-standing "nervous breakdown" who received considerable benefit from an art course which began with "the art of seeing" and went on to a more conventional aspect of learning to sketch and use colors.—*H. E. Burt* (Ohio State).

292. Michele, E. Contributo clinico allo studio dei deliri familiari similari (psicosi indotte). (Clinical contribution to the knowledge of familial delirium (induced psychosis).) *Rass. di stud. psichiat.*, 1931, 20, 69-123.—The author has studied a case of induced psychosis in three brothers (who recovered) in the asylum of Mombello. The clinical symptoms would class the case as the "dementia praecox familiaris" of Kraepelin. In interpreting its pathogenesis, the author discards the mechanism of induction or communication of the psychosis which is accepted by many authors. The effect of one subject upon the others is no different from the usual effect of middle life in mental disease, increased in this case by the emotional influence due to relationship. The author establishes the need for adequate prophylaxis in such cases.—*G. C. Ferrari* (Bologna).

293. Mira, E. El valor pronóstico del metabolismo basal en la psicosis maniaco-depresiva. *Arch. de neurobiol.*, 1931, 11, 43-46.—A discussion of the prognostic value of basal metabolism in the manic-depressive psychoses. Eight cases of manic-depressive psychosis are cited in which the values of basal metabolism are subnormal for the manic condition and above normal for the depressed state. This is contrary to general clinical findings, and explainable by the fact that basal metabolism in psychosis depends more on the motor activity than on the affective tone. Thus the prognosis of the true manic or depressive state depends on the selection of the euphoric or melancholic states, which must be determined by exploring the primary reflexes and by a determination of the sugar content of the blood. Clinical findings show that hyperglycemia always accompanies the manic state, while hypoglycemia is always associated with the depressed state.—*C. C. Neet* (Clark).

294. Monrad-Krohn, G. H. The clinic of epilepsy. *Acta psychiat. et neur.*, 1931, 6, 137-157.—Cryptogenetic epilepsy is given as a better term for what is commonly called genuine, essential or idiopathic epilepsy. The probability is that it is due to a number of different causative factors. Among these causes are (1) local lesions in the cerebrum or meninges, (2) metabolic disturbances, as water retention, (3) vascular disturbances, (4) external con-

ditions, especially the relation between rest and fatigue, and (5) ingestion of certain substances in individual cases, such as alcohol or chocolate. Between attacks, which vary greatly with the individual, most patients show no neurological disturbances.—*M. B. Mitchell* (George School, Pa.).

295. Morgan, J. J. B. *Work-book in abnormal psychology*. Form A. New York: Longmans, Green, 1931. Pp. 88.—A work-book in 42 lessons, designed to accompany the author's *The Psychology of Abnormal People*.—*R. E. Willoughby* (Clark).

296. Nicole, J. E. *Psychopathology; a survey of modern approaches*. New York: Dodd, Mead, 1931. Pp. 215. \$4.00.—(Not seen).

297. Patterson, W. L. Occupational therapy in a state hospital for the insane. *Occup. Therap. & Rehab.*, 1931, 10, 281-290.—Occupational therapy began in the mental hospitals and is frequently the main factor in treatment. The patient is taken to the building where others are working and becomes interested in doing likewise through imitation. The work itself is merely a by-product. Effort is made to find work which will be creative in character. Chronic patients sometimes have their activities diverted by occupational therapy, for example tearing rags for rugs, instead of tearing their own clothing. Musical training is promising but difficult in execution. The therapist needs ability to get the patient's point of view.—*H. E. Burt* (Ohio State).

298. Pennacchi, N. F. Un caso di "acrodinia" (infantile) di Selter-Swift-Feer in un giovane di 19 anni. (A case of acrodynia (infantile) of Selter-Swift-Feer in a youth of 19.) *Riv. di pat. nerv. e ment.*, 1931, 37, 126-147.—A case of trophodermatoneurosis, erythroedema very well marked. History of the illness and complete bibliography.—*G. C. Ferrari* (Bologna).

299. Robb, C. C. Changing goals of psychiatric social work. *Amer. J. Orthopsychiat.*, 1931, 1, 476-486.—Psychiatric social work has arisen out of both psychiatry and social work. Here as in all case work the broad psychological aspects are assuming primary importance. Procedure promises less change than do the reasons and goals in connection with procedure.—*H. Peak* (Yale).

300. Roberti, C. E. Contributo allo studio delle sindromi schizofreniche. Considerazioni sulla patogenesi di un caso di demenza precoce iniziata con sintomi di tetania. (Contribution to the study of the schizophrenic syndrome. Considerations of the pathogenesis of a case of initial dementia praecox with symptoms of tetany.) *Rass. di stud. psichiat.*, 1931, 20, 292-315.—The author presents a case of schizophrenia which began with symptoms of tetany. The clinical history and the individual constitution warrant the interpretation of a toxic mechanism which acts like a substratum of latent hypoparathyroidism. After strong emotional shock the patient suffered physical disturbances which in the opinion of the author are of pathogenic importance in the genesis

of tetany and the schizophrenic syndrome.—*G. C. Ferrari* (Bologna).

301. Rosenow, C. Orthopsychiatry and statistics. *Amer. J. Orthopsychiat.*, 1931, 1, 521-526.—Control of conditions and statistical reliability are both necessary in order to establish truth. "If samples are biased, statistical probabilities do not have the slightest logical connection with the truth." Control is "the description of conditions which are relevant to the problem." The clinician places too much emphasis in the facts and too little on analyzing what he is trying to find out. "Sooner or later the time will come when clinicians will attempt to control conditions with reference to problems which they themselves have formulated." Then statistical methods will become an indispensable tool.—*H. Peak* (Yale).

302. Rydberg, E. Birth trauma and epilepsy. *Acta psychiat. et neur.*, 1931, 6, 213-220.—Two case histories are given of children with birth trauma who later had epileptic fits. Out of 49 children with birth injuries, 20 had fits. Of those with fits, more than half were idiots or imbeciles.—*M. B. Mitchell* (George School, Pa.).

303. Sano, F. Le nouveau projet de loi sur le régime des aliénés. (The new projected law for the management of mental patients.) *J. de neur. et de psychiat.*, 1931, 31, 47-50.—The author discusses the projected law submitted to the Belgian Parliament proposing the application of legal powers to regulate the treatment of mental patients. In view of the fact that there is much apprehension in regard to the cooperation of physicians and legal authorities the author describes in detail the working of the American law and procedure relative to detention of mental patients. He believes that a speedy consideration of the project is advisable in view of the present chaos regarding the legal status of mental patients.—*H. Sys* (New York City).

304. Santangelo, G. Capacità civile e capacità matrimoniale nei riguardi della psichiatria. (Civil capacity and fitness to be married in the light of psychiatry.)—The author recognizes three chief classifications: (1) cases of absolute incapacity (all chronic forms, primary or secondary); (2) cases of suspended capacity (all the maladies of serious or periodic aspect, which have caused the commitment of the patient to an asylum, patients who have been allowed out on parole, certain abnormal patients, patients with infective psychosis, traumatics and post-operatives); (3) cases of suspected capacity (patients with less serious illness). The patients of the first division should be forbidden to marry by law; those of the second for the time being; those of the third should have the right to be married when no necessity of forbidding it appears.—*G. C. Ferrari* (Bologna).

305. Simon, Th. Nouvelles remarques sur la démence paralytique et les examens propres à en apprécier le degré. (Recent observations on paralytic dementia and the examinations necessary for

appreciating its degree.) *Ann. med.-psychol.*, 1930, 88, 436-448.—It is necessary to revise our ideas on dementia due to the results obtained from modern methods of therapeutics in general paralysis. Dementia implies a definite weakening of the mental faculties as shown by the progressive decay of all the intellectual operations and by cortical lesions found in autopsies. An examination of mental weakening in general paralysis shows it to be inconsistent in details though constant in existence. Furthermore, intellectual operations are accomplished, though with difficulty; thus, the lowering of the intelligence level is frequently illusionary. We risk making grave errors in judging general mental weakening by its modalities and not by its total value. It is necessary to be able to recognize irremediable mental weakening from a lowering of the intelligence level due to impediments or inertia. There is a double problem to be considered when releasing a patient: has he recovered a sufficiently high intelligence level for proper living, and do his functional disorders still exist? Examinations available are the clinical conference and the graded tests, viz., intelligence, instruction, and professional tests.—A. B. Hunter (Clark).

306. Sjogren, V. H. Du syndrome accompagnant les lésions du corps hypothalamique (corpus subthalamicum) de Luys. (The syndrome accompanying lesions of the hypothalamus body of Luys (corpus subthalamicum).) *Acta psychiat. et neur.*, 1931, 6, 301-326.—A review is given of the cases found in the literature that have come to autopsy. Three new cases with similar symptoms are reported which have not come to autopsy. The important symptom is hemiballistic hyperkinesia on the side of the body opposite to that in which the lesions have been found in the body of Luys. The involuntary movements have been augmented by intention and absent during sleep. Two of the three cases showed athetoid movements in the fingers and toes. Bibliography.—M. B. Mitchell (George School, Pa.).

307. Störing, G. E. Über den ersten reinen Fall eines Menschen mit völligem, isoliertem Verlust der Merkfähigkeit. (Concerning the first clear case of a person with complete, isolated loss of attentive capacity.) *Arch. f. d. ges. Psychol.*, 1931, 81, 257-384.—The patient, suffering from gas poisoning which occurred in May, 1926, is described as having lost the ability to retain any experiences since that time. He can carry on conversation, answer questions, carry out commands, etc., provided the sentences spoken to him are not too long. If the commands are repeatedly given they are perhaps carried out. Memory span seems to be extremely short, ranging from one to two seconds. A striking illustration that is typical of the patient is that although he has been married for a year or more he has no memory of that fact and still looks upon his wife as his fiancée only; and each time that he sees her, be it a hundred times a day, it is as though for the first time after long separation. His memory for

events before the poisoning is equal to that of a normal person for a week past. This leads the author to make the statement that forgetting is not due to lapse of time per se but rather to the events happening during that time. No disturbances in other functions are present which cannot be traced to the patient's inability to retain recent experiences. Perception, recognition of situations, persons, and objects (save those experienced during the last five years), feeling, voluntary activity to a certain extent, judging ability (providing it does not require the retention of experiences of the last five years) seem largely normal. It is this fact that causes the author to hold that this is the first pure case of its kind on record.—R. H. Waters (Arkansas).

308. Stubbe-Teglbjaerg, H. P. The pathophysiology of epilepsy. *Acta psychiat. et neur.*, 1931, 6, 159-173.—M. B. Mitchell (George School, Pa.).

309. Thiele, R. Aphasie, Apraxie, Agnosie. (Aphasia, apraxia, agnosia.) *Fortsch. Neur., Psychiat. u. Grenzgeb.*, 1931, 3, 359-371.—A critical review of the literature, chiefly German and French, for 1929-30. In weighing the contributions of the classical and the newer psychological schools, Thiele's personal opinion is that researches inspired by *Gestaltpsychologie* have already contributed valuable points of view to the aphasia problem and that in questions of localization, the positive contributions of the classical teaching are more convincing than the objections of its opponents. Although various aspects of the two schools are so divergent that a real synthesis is impossible, yet, starting from different theoretical standpoints, and by different routes, one may arrive at the same or at least related positions. Although the classical doctrine must be modified, we are not yet ready to cast it aside—in particular the conception that the position of the lesion determines the symptomatology. Thiele devotes considerable space to Feuchtwanger's monograph on amusia, because it combines the teachings of the classical school with the most delicate psychological analysis and the most advanced psychological theory, and because the conclusions hold also for other fields, particularly aphasia. Of great significance for the theory of symbolic functions is Grünbaum's new point of view in his *Aphasie und Motorik*, viz., that the disturbances should be regarded as a regression of the motor apparatus to a primitive level, rather than a disintegration of the system of bodily mechanics. A deeper consideration of the general motor disturbances in aphasias would bridge the divergent teachings of the classical and psychological schools. Minkowski sketches a genetic-dynamic-structural method for aphasia problems. Kleist gives his experiences with motor aphasias observed during the war, and correlated with the anatomical findings. Klein brings out the relationship between thought-content and aphasia, showing that lack of psychic material may be responsible for the involvement of spontaneous speech, while receptive speech (*Nachsprechen*) remains intact. In the discussion

of "motor-amnesic" aphasia, Bürger and Strauss point out that behind it may be a general "categorical" disturbance, a loosening of the connection between word and object, which is the end-result of the shrinkage and lowering of level of the entire damaged and poverty-stricken personality. In the field of localization, the most important recent publication is that of Nissel v. Mayendorf, based on a complete series of whole-brain sections of a case showing almost complete motor aphasia, motor amnesia, agraphia, alexia, partial word-deafness, and amnesic aphasia. His outstanding conclusion is that there is no morphological preformed speech center. The recent literature on apraxia is very small, doubtless because Liepmann's investigations laid the foundations so thoroughly that there has been little room for later original theories. Recent work has only confirmed his studies or extended them in minor particulars. Grünbaum has presented a new point of view in regard to apraxic disturbances, which in a certain sense would be nothing less than an overturning of the classical doctrine of the "will." He formulates his conclusions as follows: "We do not act on the basis of representations, but we form the representations on the basis of action." Other subjects reviewed by Thiele are developmental disturbances of speech, polyglot aphasias, alexia, and *Fingeragnosie*. References.—M. E. Morse (Catonsville, Md.).

310. Veo, L. A personality study of six adolescents who later became psychotic. *Smith Coll. Stud. Soc. Work*, 1931, 1, 317-363.—(*Soc. Sci. Abst.* III: 18239).

311. Vermeulen, G. Un cas d'audi-mutité idio-pathique en voie de guérison. (A case of idiopathic auditory mutism in the course of recovery.) *J. de neur. et de psychiat.*, 1930, 30, 799-813.—The history of a case of mutism in a child of six, in which a considerable improvement was observed in the course of two years. The author believes that the mutism in this case was caused primarily by a retarded development of the motor functions. Other possible contributing causes, however, must not be overlooked, namely timidity and instability of character, an intellectual defect and an impairment of auditory acuity. He is doubtful whether any sort of treatment can accelerate the speech development, but believes that the demutization method of Decroly and Herlin which was applied in the above mentioned case is helpful, especially in combating superimposed characterologic and intellectual inhibitions.—H. Sys (New York City).

312. Vermeulen, G. Un trouble rare de l'évolution du langage chez un enfant de 8 ans. (A rare disorder of speech development in a child of eight.) *J. de neur. et de psychiat.*, 1930, 30, 827-836.—The report of a detailed examination of a child who at the age of eight still showed pronunciation difficulties similar to those encountered by those adults who are little gifted in learning and pronouncing a foreign language. The author believes that although the

manifestations appear to be of motor origin, we do not have to deal here with a case of dyspraxia, but rather with a dygnosis of a special type which has only secondarily caused the apraxic disorder. Accordingly the outlook is more favorable, because in the course of the further auditory verbal development of the child the disturbance will tend to disappear spontaneously.—H. Sys (New York City).

313. Wittels, F. Der hysterische Charakter. (The hysterical character.) *Psychoanal. Bewegung*, 1931, 3, 138-165.—The article comments on the interest psychoanalysis has taken in hysterics and compulsion neuroses and explains the phenomena of conversion symptoms and the castration complex with reference to them. He contrasts these psychopathic states in men and women and discusses the dream life that reveals itself in them. The hysterical type has the characteristics of unreliability, excessive aimless activity, and good will; the compulsion neurotic type is responsible, meticulous, and earnest, directing energy to worthy ends. The article contrasts the two types in the love life, in sex urge, and in pseudologia phantastica.—A. B. Herrig (Michigan Central State Teachers College).

[See also abstracts 67, 149, 317, 377, 390, 440, 469, 520.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

314. Aitken, B. Temperament in native American religion. *J. Roy. Anthropol. Instit. Great Britain & Ireland*, 1930, 60, 363-387.—(*Soc. Sci. Abst.* III: 16668).

315. Alker, E. Mittelalterliche Religiosität in der Gegenwart. (Present-day medieval religiosity.) *Zsch. f. Völkerpsychol.*, 1931, 7, 306-311.—Author calls attention to medieval religious phenomena prevalent in northern Scandinavia and Finland.—J. R. Kantor (Indiana).

316. Allport, F. H. Culture conflict and delinquency. II. Culture conflict versus the individual as factors in delinquency. *Soc. Forces*, 1931, 9, 493-497.—(*Soc. Sci. Abst.* III: 18212).

317. Altavilla, E. Dalla monomania omicida alla delinquenza per tendenza. (From homicidal mania to delinquency by tendency.) *Scuola pos.*, 1931, 39, 193-206.—The new Italian penal code admits the "instinctive tendency" toward criminal action, but unfortunately it does not recognize its biological nature, and leads to an aggravation of punishment.—G. C. Ferrari (Bologna).

318. [Anon.] Aspects suspect; Basic for the far east—for India. *Psyche*, 1930, 11, 1-9.—An eccentricity of the verb called *aspect* comes to light in connection with the forming of a Basic universal language. Aspects have chiefly developed in the Slavonic languages, where they have tended to disappear on the whole, but still remain in the perfective. But anything expressed by the Russian verb, for instance, can probably be expressed in any other language without the use of modifications. How-

ever, the philologists hinder the progress of Basic because of their enthusiasms for languages which are likely to be regarded as "rich" in verbal forms. In the far east, an editorial in *The Japan Journal* recommends Basic as being not ordinary but above ordinary English; and an editor in *Oversea Education*, a journal of Madras, India, speaks of Basic as having reached a useful and necessary stage.—T. R. Garth (Denver).

319. [Anon.] Psychological expedition to central Asia. *Science*, 1931, 74, 383-384.—A preliminary report of the expedition of July of the current year headed by Luria, which investigated the condition of various psychological functions among the primitive nomadic peoples of Uzbekistan and neighboring regions. The expedition consisted of fourteen psychologists; ten specific problems were studied; the results will be published in a special volume, and some of them in foreign technical journals. A second expedition along the same lines will take the field in 1932.—R. R. Willoughby (Clark).

320. Arbore, P. Il trattamento profilattico della criminalità. (Prophylactic treatment of criminality.) *Scuola pos.*, 1931, 39, 222-226.—The new Italian code is very well organized, but its usefulness will be limited while it does not begin with a complete and exact knowledge of the personality of the criminal.—G. C. Ferrari (Bologna).

321. Azzalini, M. Responsabilità morale e reattività sociale. (Moral responsibility and social reactivity.) *Scuola pos.*, 1931, 39, 139-151.—The author disagrees with the classic point of view in the consideration of criminality, but decides that punishment can serve as means of social reeducation.—G. C. Ferrari (Bologna).

322. Baum, M. Über das von einer Familie täglich zu leistende Arbeitspensum und den Rhythmus des Familienlebens. (Concerning the daily tasks of work to be accomplished by a family and the rhythm of family life.) *Arch. f. Sozialwiss. u. Sozialpol.*, 1930, 64, 595-615.—(*Soc. Sci. Abst.* III: 18116).

323. Behn-Eschenburg, H. Ferdinand Hodlers Parallelismus. (Ferdinand Hodler's parallelism.) *Psychoanal. Bewegung*, 1931, 3, 329-340.—Hodler has established a new system of art which he calls "parallelism," because he says this characteristic exists in all life, all is repetition. In several reproductions of Hodler's art, this style is pointed out. The author traces the life history of the artist and his personality traits through the type of composition characteristic of him.—A. B. Herrig (Michigan Central State Teachers College).

324. Bell, R. Unsnarling our race prejudices. *World Tomorrow*, 1931, 14, 81-82.—(*Soc. Sci. Abst.* III: 18139).

325. Belloni, G. A. Lombroso e la criminologia italiana. (Lombroso and Italian criminology.) *Riv. di cultura*, 1929, 16, 345-353.—(*Soc. Sci. Abst.* III: 18215).

326. Bernard, L. L. On the making of textbooks in social psychology. *J. Educ. Sociol.*, 1931, 5, 67-81.—In reply to Gardner Murphy's criticism of the non-research character of recent textbooks in social psychology it is pointed out that such texts may be written for the purpose of presenting to the students a summary of the facts, rather than for the demonstration of experimental methodology. "An adequate social psychology could not now be written from the materials of experimental research alone." Common-sense methods "must be used both to check the interpretations of the experimenter and in re-interpreting his data, and to secure data—especially with regard to the wider or collective aspects of behavior—which the experimenter cannot secure by experiment alone, because he cannot produce an adequate technique." Social psychology need not be forced to confine itself to the concepts and viewpoints of individual psychology.—F. D. McTeer (Detroit City College).

327. Billstrom, J. Versuch einer Analyse eigener Schreibfehler in den Jahren 1915-1929. (Research on the analysis of my own errors in writing during the years 1915-1929.) *Acta psychiat. et neur.*, 1931, 6, 443-455.—The psychogenetic errors described by Freud were among the classifications, but were considered of minor importance.—M. B. Mitchell (George School, Pa.).

328. Birkhoff, G. D. A mathematical approach to aesthetics. *Scientia*, 1931, 50, 133-146.—To determine the rôle of the formal elements in art, the author devises a formula for finding the esthetic value of an object within certain limited classes of artistic expression by groups of qualified observers. The terms of the formula are explained psychologically, on the basis of the relation between order and complexity.—R. G. Sherwood (Redmond, Washington).

329. Blackburn, B. Voluntary movements of the organs of speech in stutterers and non-stutterers. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 1-13.—Speech defects may be caused primarily by specific structural faults in the physiological mechanisms involved in talking, or they may be symptomatic of general functional disorders. Since, in the latter case, motor peculiarities should be demonstrated in any of the disorders, the investigator devised tests to measure voluntary, rhythmical movements of the diaphragm, tongue, lips, and lower jaw, with a simple tapping test as a check. Standard deviations in the rate of voluntary performance were consistently greater with the stutterers, particularly in movements of the diaphragm and tongue; the gross quantitative differences between the two groups apparently indicate types of stutterers; but no significant differences between the two groups were demonstrated in the tapping test.—F. A. C. Perrin (Texas).

330. Boome, E. J., & Richardson, M. A. The nature and treatment of stammering. London: Methuen, 1931. Pp. 135. 3/6.—A first-hand study

of the causation, symptoms and treatment of stammering. Numerous case histories are given. Stammering is treated as a nervous disorder and not as a speech defect. The authors discuss different methods of treatment and give full information concerning those which they have found most successful.—*F. C. Bartlett* (Cambridge, England).

331. Borg, B. *Principes physiologiques du langage en vue du traitement de certaines parésies laryngées*. (Physiological principles of language in view of the treatment of certain laryngeal pareses.) *Acta Oto-Laryngol.*, 1931, 16, 317-322.—Diagrams are given to show the position of the vocal cords. Cases of laryngeal paresis have been treated successfully by phonetic exercises.—*M. B. Mitchell* (George School, Pa.).

332. Brown, R. M. *Aspects of crime and its treatment*. *Univ. North Carolina Extension Bull.*, 1931, 10, 72-78.—(*Soc. Sci. Abst.* III: 18217).

333. Calverton, V. F. *Modern anthropology and the theory of cultural compulsives*. *Psyche*, 1930, 11, 43-62.—Social history is full of cultural compulsives. In Darwin's day everything was set for the success of the doctrine of evolution, and the science of anthropology is closely bound up with the development of this doctrine. Westermarck's doctrine regarding monogamy did not and does not necessarily represent the facts, but it filled a socio-intellectual need of the day, that is, the need of the all-prevailing middle-class culture. Because of the fact that we have cultural compulsives pure objectivity in social sciences is impossible. There can be no anthropology for anthropology's sake.—*T. R. Garth* (Denver).

334. Carpenter, N. *The sociology of city life*. New York: Longmans, 1931. Pp. xix + 502. \$3.90.—A college textbook covering most phases of urbanization, including history, sociology, anthropology, and psychology. There are chapters on the beginnings of city life, the location of the city, the physical setting of city life, city growth and its control, the dweller in the city, the urban way of life (two chapters, on the impact of the city upon personality, and work, home, worship, recreation), the debit side of city life (three chapters, on poverty, crime and vice, mental deficiency, mental disease, and suicide), the economy of city life (two chapters, on supply and waste, public utilities and government), the urban prospect, and the urban outcome (historical and prognostic). The book is fully documented and illustrated; the chapters of greatest interest to the psychologist are those on the urban way of life. There is an appendix containing suggestions for discussions and projects.—*R. R. Willoughby* (Clark).

335. Carrara, M. *L'elemento antropologico nel nuovo codice penale*. (The anthropological element in the new penal code.) *Scuola pos.*, 1931, 34, 304.—Carrara examines the new Italian penal code to see how much it has been influenced by medicine and by criminal anthropology. He finds, among other

things, that the new code recognizes the habitual criminal, or professional criminal, and the criminal who commits his crime because of an instinctive tendency due to "a special leaning to crime which finds its cause in the special evil nature of the guilty man." The "born criminal" of Lombroso is not named, but the substance is the same.—*G. C. Ferrari* (Bologna).

336. Carter, M. A. *The integration of psychology and faith*. *Rel. Educ.*, 1931, 26, 553-559.—God and faith are realities as much as matter and science. Psychology has contributed greatly to the effectiveness of religious instruction, as in its description of will, habit, and the stress put upon teaching in the early years. It describes conscience, but conscience is more than its qualities and the process by which it develops. Religion is the best preventive of vicious complexes and warns against the mechanisms of the behaviorists. It is the man of everyday life who without theories proceeds naturally to utilize the good and practical things about him who integrates psychology and faith.—*J. P. Hylan* (Stoneham, Mass.).

337. Clements, F. *Plains Indian tribal correlations with sun dance data*. *Amer. Anthropol.*, 1931, 33, 216-227.—The product-sum method of correlation and Yule's association formula may be used with ethnographical data to show historical relations between tribal cultures. Both methods are described, and by way of illustration, applied to the sun dance complex of the plains.—(*Soc. Sci. Abst.* III: 18287).

338. Commandon, —. *L'amour, son rôle dans la vie individuelle, familiale, et sociale*. (Love, its part in individual, family and social life.) *Comité nat. d'études soc. et pol.*, 1929, No. 385. Pp. 43.—(*Soc. Sci. Abst.* III: 18106).

339. Dashiell, J. F. *The objective character of legal "intent"*. *Psychol. Rev.*, 1931, 38, 529-537.—One obstacle to the acceptance of the objective mode of description in psychology is the use of terms supposed to have subjective significance only, such as the term "intent." The author points out that this term as used in law is really objective, since subjective "intent," meaning state of mind, is shown to be immaterial in legal usage, and true and actual intent can be determined only objectively. It is argued that every-day usage also confirms this importance of objective intent and lack of importance of its subjective correlate.—*A. G. Bills* (Chicago).

340. Di Tullio, B. *Manuale di antropologia e psicologia criminale applicata alla pedagogia emendativa, alla polizia ed al diritto penale e penitenziario*. (Manual of anthropology and criminal psychology applied to corrective pedagogy, the police, and penal and penitentiary law.) Rome: Anonima Romana, 1931. Pp. 367.—This manual is an enlargement and an integration of another work by the same author which was honored in 1929 by the Premio Lombroso. In this volume the author devel-

ops the modern conceptions of criminal anthropology. According to him criminal anthropology is precisely that science which must needs concern itself with the study of those individuals who, because of their peculiar personality or abnormal constitution, happen to present a more or less grave predisposition to anti-social behavior which is consequently criminal, i.e., contrary to the exigencies and interests of social life. Criminal anthropology endeavors to find the origins of such individuals in order to combat them and prevent their development by starting with their very first manifestations of anti-social behavior.—*M. Ponzo* (Turin).

341. Ellis, H. *More essays of love and virtue*. New York: Doubleday, Doran, 1931. Pp. 228. \$2.00.—(Not seen).

342. Erschowitz, N. *Psychotechnische Untersuchung von Schriftproben*. (Psychotechnical investigation of printing samples.) *Indus. Psychotechn.*, 1931, 8, 51-53.—A journal which was printed with Romanic type was to be changed to Futura type; the editor therefore made experimental tests on the legibility of the two kinds of types. Ten subjects were asked to read passages printed in the two kinds of type, under the following conditions: normal reading, reading when the paper moves, as for example, when the subject is reading on a street car, etc.; reading with tachistoscopic exposure; reading at a distance; and reading in twilight. The subjects were also requested to state their reasons for preference. It was found that only by the tachistoscopic and distant reading methods was there any appreciable difference in the legibility of the two types, the Futura, in those cases, being the more legible.—*C. Burri* (Chicago).

343. Field, H. E. *The attitudes of prison inmates*. *Amer. J. Orthopsychiat.*, 1931, 1, 487-500.—"Characteristic reaction tendencies" of prisoners are discussed under the following headings: inappropriate life goals, failure to accept discipline, self-justification, sense of hopelessness, guilt feeling, sex, work, leisure, crime and law, the earning of release, parole supervision and the police, the reception expected from society.—*H. Peak* (Yale).

344. Pinke, H. *Der Erziehungsstrafvollzug*. (Educational punishment.) *Psychol. Rundschau*, 1931, 3, 170-174.—The article discusses the difference between the old attitude of punishment for crime and the newer idea of reforming. He sees the difficulties that arise for the latter, both in the attitude of the prisoner and in the milieu of the prison, which conveys an unnatural training atmosphere. True pedagogical procedure is almost impossible.—*A. B. Herrig* (Michigan Central State Teachers College).

345. Flugel, J. C. *The emotional value of dress*. *Psyché*, 1931, 12, 40-59.—Clothes are for the defence, support and embellishment of man's organism. Two fundamental motives are decoration and modesty, and there are epochs in man's history when exhibitionism triumphs over the latter. Man's dress

is rich in subtle phallic symbols and his narcissism is more restricted than in the case of woman. As to auto-erotic elements, woman enjoys much greater liberty than man, as in the stimulation of the skin by small air currents through light materials characterizing her dress of today.—*T. R. Garth* (Denver).

346. Flynn, J. F. *Love and sex life of women*. Bingham, Utah: Author, 1931. Pp. 184. \$2.00.—(Not seen).

347. Foley, M. E. *Probation of adult offenders*. *Indiana Bull. Charities & Corrections*, 1931, No 193, 290-293.—(*Soc. Sci. Abst.* III: 18204).

348. Freeman, D. *Colour prejudice in the British Empire*. *Contemp. Rev.*, 1931, 139, 349-354.—(*Soc. Sci. Abst.* III: 18140).

349. Fuster, J. *Comentarios al empleo de la prueba de Fernald-Jacobson en los delincuentes*. *Arch. de neurobiol.*, 1931, 11, 30-42.—In an effort to gain further knowledge concerning the psychology of the delinquent child and to place the social adjustment of the delinquent on an objective basis, an experimental procedure was carried out in which the Fernald-Jacobson picture tests were used to measure the ethical sense (comprehension of moral acts) of 100 delinquents. Some of the conclusions presented are: the observation and study of objective facts are of immense value in developing a psychology of the delinquent and in facilitating his readjustment in society. There is a low correlation (.36) between the Fernald-Jacobson tests and tests of general intelligence. The Fernald-Jacobson tests evaluate the capacity of moral comprehension, but they give no measure of moral conduct.—*C. C. Neet* (Clark).

350. Grunle, H. W. *Aufgaben der Kriminalpsychologie*. (The tasks of criminal psychology.) *Zsch. f. d. ges. Strafrechtswiss.*, 1931, 51, 469-480.—(*Soc. Sci. Abst.* III: 18285).

351. Haushofer, K. *Wanderwucht der Monsunländer*. (The urge toward migration in the monsoon countries.) *Zsch. f. Geopol.*, 1931, 8, 224-234.—(*Soc. Sci. Abst.* III: 18122).

352. Hellwig, A. *Der psychologische Sachverständige im Gerichtsverfahren*. (The psychological expert in court procedure.) *Indus. Psychotechn.*, 1930, 7, 243-247.—The author stresses the need for psychologists and psychiatrists in many legal cases and points out that judges should have psychological training.—*A. W. Kornhauser* (Chicago).

353. Hodgen, M. T. *The doctrine of survivals*. *Amer. Anthropol.*, 1931, 33, 307-324.—One of the most interesting contributions of E. B. Tylor was the doctrine of survivals. It is often assumed that in formulating this doctrine he merely imposed a biological concept on social phenomena, borrowing the idea from Darwin. Hodgen in sketching the history of the concept shows that this is not true. Although using the same term, Darwin and Tylor meant different things, formulated their concepts from different ranges of phenomena, and applied the doc-

trine for distinctly different purposes. Tylor evolved his concept in support of the idea of the progressive development of human culture, which was seriously challenged during the early part of the nineteenth century. There was much assertion of the degeneration of savages from a higher state. The problem was to prove that savagery was merely an initial state in the development of peoples. By comparing the material evidence of prehistoric archeology and the psychological material of folklore, Tylor noted similarities which could also be paralleled among existing savages. The result was the concept of survivals, which in turn became an instrument for tracing stages in the development of civilized people. Tylor deals with the question of similarities in primitive culture in his researches and reinstates the savage in the progressive series. In his work *Primitive Culture* he invokes the doctrine of survivals in order to explain phenomena in the present which had hitherto been inexplicable. Thus Tylor is a conserver rather than an innovator, since his great doctrine was evolved in defense of the eighteenth century doctrine of human progress.—C. M. Diserens (Cincinnati).

354. Hoesch-Ernst, L. *Über fundamentale Unterschiede zwischen Mann und Frau bei genialen Schaffern.* (The fundamental differences between men and women in intellectual accomplishment.) *Psychol. Rundschau*, 1931, 3, 129-132.—This is an abstract of a talk given before the Congress of German Psychology. The author reviews Terman's studies of intelligence and seeks an answer to the question why no genius mind has ever appeared among women. Accomplishment of high note demands intelligence plus passion for an interest. The author holds that the central interest of all women is in the concrete, that she has no passion for the abstract apart from application. A reason for the difference between the two sexes is found in the difference in glandular functioning.—A. B. Herrig (Michigan Central State Teachers College).

355. Holmes, J. H. *Psychologie und Ethik.* (Psychology and ethics.) *Psychol. Rundschau*, 1931, 3, 161-169.—A translation of a sermon preached by Holmes in the Community Church, New York. He holds that since psychology deals with the inner life and ethics with relationship to the outer world, there can be no conflict between the two. He regards religion not as an inspiration from above, but, like ethics, as an outgrowth from the people. He asks whether psychology has taken the place of ethics and religion. He comments on some of the conflicts of ideas that have arisen since psychology has diagnosed human nature. Among these he names: discrimination between good and evil, the question of the repressive attitude of past ethics versus the self-expressive attitude of today, and the problem of freedom of the will as against the mechanistic theory. He thinks psychology has given its attention too exclusively to a study of the individual mind.—A. B. Herrig (Michigan Central State Teachers College).

356. Junod, H. *Le noir africain comment faut-il le juger?* (On what basis should the African negro be judged?) *Africa*, 1931, 4, 330-342.—(*Soc. Sci. Abst.* III: 18104).

357. Kamenetzki, P. *Die Organisation der kriminologischen Forschung in der Sowjetunion.* (The organization of criminological research in the USSR.) *Zsch. f. d. ges. Strafrechtswiss.*, 1931, 51, 597-604.—(*Soc. Sci. Abst.* III: 18356).

358. Kautsky, K. *Soziale Hygiene der Frau. Eine sozialmedizinische Darstellung des weiblichen Geschlechtslebens.* (Social hygiene of woman. A social-medical presentation of feminine sex life.) Prag: Verl. des Parteivorstandes der Deutschen sozialdemokratischen Arbeiterpartei in der Tschechoslowakei, 1931. Pp. 76. M. 0.75.—A popular outline of the pathology and hygiene of feminine sex life from a social viewpoint. All phases are discussed (menstruation, sexual intercourse, pregnancy, birth, confinement, climacteric, venereal diseases). Special value is placed on the psychical connections. There is portrayed the social-psychological foundations of fear of the child, the group expression of which is seen in the decline of the birth rate, likewise its consequences for the spiritual life of women (lack of sexual satisfaction, frigidity, etc.). The significance of birth control for mental hygiene is evaluated. The doubtful psychical consequences of interrupting pregnancy are portrayed. In the presentation of the climacteric, the psychical changes are treated in detail, as is also the presumption that prostitution is the source of venereal disease. In the concluding chapter, there is a discussion of the rise of the laboring classes, which creates the material basis of mental and physical hygiene of the masses, and at the same time initiates a spiritual and ethical revolution which is as essential for the health of the people as is the hygiene.—K. Kautsky (Vienna).

359. Kearney, J. P. *Psychology in the new literature.* Chicago: Loyola Univ. Press, 1931. Pp. xi + 85. \$1.00.—The interest in psychology which forty years ago centered around the psychological novel and a few rising lights in the professional field of psychology has now overflowed into a variety of forms and influences which command attention. Kearney notes and evaluates these from the standpoint of a Catholic. He finds not only that great novelists and poets like Shakespeare, Claudel, Francis Thompson, Henry James, and Conrad were psychologists, but great biographers also emphasize the workings of the mind as the essential features of personality. Some recent writers of fiction have become so enamored of the inner life that they seem lost in a whirlpool of purposeless introspection. But the most vicious tendency comes from Freud and Jung, whose influence is seen in the very heart of modern life, removing sex restrictions and exalting the filth in the bottom of our natures. The result is a dropping of ideals, as in the writings of Eugene O'Neill. The Catholic church finds its great mission

in the preserving of ideals, especially those of the home.—*J. P. Hylan* (Stoneham, Mass.).

360. Kielholz, A. Tell und Parricida. (Tell and parricide.) *Psychoanal. Bewegung*, 1931, 3, 292-306.—The story of Tell is traced to an age-old myth. The varied versions are cited, and it is traced through art, drama and epic. In Schiller's presentation a desire is seen to free Tell from the accusation of murder. However, most commentators on the drama hold him guilty of parricide, with vengeance and cowardice back of it. A renaissance of the Tell story has followed the World War, as the Swiss has realized that the world has come to respect his love of liberty. A bibliography follows this article.—*A. B. Herrig* (Michigan Central State Teachers College).

361. Laird, J. The justification of punishment. *Monist*, 1931, 41, 352-375.—Discussions of punishment are concerned usually with secondary questions, but the solution of primary questions depends on the general theory of punishment accepted. Laird urges that punishment is by definition retributive, but that it cannot be justified by its mere definition. By punishment he means "a human contrivance whereby an offender is made to undergo some experience usually considered unpleasant on account of an offense committed by him." Punishment is always retrospective; always human, never natural. Three theories of the justification of punishment have been advanced, viz.; reformation, retribution and deterrence. The reformatory theory is insufficient with children and ineffective with adults. Retribution is not, strictly speaking, possible, since there is no common measure of the crime and the punishment. Retribution does not annul guilt and the concept of merit is a relative term. Nor is punishment ever a good in itself. The deterrent theory is therefore the principal justification of punishment, and this theory justifies systems of punishment broadly similar to those that actually prevail. Laird illustrates this statement by examples, notes that retributive punishment would be a task beyond human powers, and concludes that "punishment should always be reduced to the minimum and should never be inflicted unless the public welfare clearly requires its infliction for some further reason than the mere fact that an offense has been committed."—*C. M. Diserens* (Cincinnati).

362. Lévy-Bruhl, L. La mentalité primitive. (The primitive mind.) New York: Oxford, 1931. Pp. 27. \$75.—(Not seen).

363. Lewy, H. Zum Dämonenglauben. (An account of demonology.) *Arch. f. Religionwiss.*, 1930, 28, 241-252.—(*Soc. Sci. Abst.* III: 16665).

364. Ley, J. Les troubles congénitaux du langage. (Congenital speech disorders.) *J. de neur. et de psychiat.*, 1930, 30, 786-795.—This is a discussion of the original article (see V: 3854). Feyeux emphasizes that congenital speech disorders are very rare. An impaired auditory equipment which may convey

only certain sounds is frequently at the basis of the mutism of the child. Although the patients seem to hear perfectly, extensive experimentation has shown that in many cases only a certain limited group of sounds were actually perceived. Very careful tests should therefore be made to ascertain whether all auditory stimuli are heard. In some few cases mutism may be due to special traits of character in otherwise physically and psychically normal children, such as stubbornness, lack of initiative, or instability.—*H. Sys* (New York City).

365. Lisi, G. C. I negatori del diritto di punire. (Those who deny the right to punish.) *Scuola pos.*, 1931, 39, 227-232.—This right derives from the necessity for social defense. It is necessary to take care that the punishment is not a vengeance, but serves to improve the personal morale of the criminal.—*G. C. Ferrari* (Bologna).

366. Lucifero, I. Antropologia, biologia e delinquenza minorile. (Anthropology, biology and the delinquency of minors.) *Scuola pos.*, 1931, 39, 212-221.—Resumé of the data taken from the first year of the juvenile courts. These courts are good, but in order to be useful the work of the presiding magistrate must be effectively augmented by that of the doctor and by the state work for maternity and childhood.—*G. C. Ferrari* (Bologna).

367. Luquet, G.-H. La magie dans l'art paléolithique. (Magic in paleolithic art.) *J. de psychol.*, 1931, 28, 390-421.—The author points out the magical functions of many paleolithic representations and discusses the question whether magical and non-magical art may coexist. 11 figures and a bibliography of 90 titles.—*N. L. Munn* (Pittsburgh).

368. Maller, J. B. An objective test of honesty. New York: Teachers College, 1930.—(Not seen).

369. Mauerhofer, R. Kriminalpsychologie. (Criminal psychology.) *Psychol. Rundschau*, 1931, 3, 174-176.—On July 27 to 31 of the current year was held the fifth summer session for psychology of the Lucerna Society in Lucerne. The author gives excerpts from some of the presentations.—*A. B. Herrig* (Michigan Central State Teachers College).

370. May, G. Social control of sex expression. New York: Morrow, 1931. Pp. 307. \$3.00.—(Not seen).

371. Molnar, A. Die Bedeutung der neuen osteuropäischen Musik. (The significance of the new East European music.) *Arch. f. d. ges. Psychol.*, 1931, 81, 166-178.—Rooted in older European music, influenced by present culture, the new East European music stands as an example of a new East- and West-European medium of musical intercourse.—*R. H. Waters* (Arkansas).

372. Morgan, W. Navaho treatment of sickness—diagnosticians. *Amer. Anthropol.*, 1931, 33, 390-402.—This is a study of the types, functions and methods of Navaho diagnosticians, who constitute a different class from that of shamans. The diagnosticians are of three kinds: men "with motion-in-the-

hand," star-gazers, and listeners. The diagnostician differs from the shaman in that he has no tribal legends, serves but a short apprenticeship, observes fewer tabus, and specializes on discovering the causes of illness, while the shaman professes to cure. Psychological abnormalities do not qualify an individual for the work. The causes of illness are revealed in trance, so that apprentices must reveal ability to enter that state. In fact "the trance is the only constant in Navaho diagnostics." The procedure seems to the author to support some of Jung's conclusions as to the structure of the unconscious. The most important function of the diagnostician is the discovery of the nature of illness and the prescription of the proper ceremony and the shamans who can give it. Four other functions of diagnosticians are ouirromancy, advice about unusual accidents, provisions for warding off dangers, and help in the recovery of lost possessions. The author notes that Indians tell their dreams freely and regard them as very important, so that "dreams carefully interpreted with related conscious material are indispensable for an understanding of individual Indians." The study of the diagnostician and his methods forms a good introduction to racial psychology by leading at once to the problems of ritual and belief in their relation to the conscious and unconscious processes of individuals.—C. M. Diserens (Cincinnati).

373. Morgenstern, L. *L'art plastique et le problème de l'espace*. (Plastic art and the problem of space.) *J. de psychol.*, 1931, 28, 473-480.—The spatial aspects of various types of plastic art are discussed in the light of how closely they reflect the "attitudes" of the subject.—N. L. Munn (Pittsburgh).

374. Newell, J. L. *The Chinese family: an arena of conflicting cultures*. *Soc. Forces*, 1931, 9, 564-571.—(*Soc. Sci. Abst.* III: 18117).

375. O'Rourke, D. *Fifty family deserters: an inquiry into the reasons for their desertion*. *Smith Coll. Stud. Social Work*, 1931, 1, 377-401.—(*Soc. Sci. Abst.* III: 18119).

376. Pittsburgh Federation of Social Agencies. *Bibliography of studies of social conditions in the Pittsburgh area, 1920-1930*. Pittsburgh: Tonat Printing Co., 1931. Pp. 85.—(Not seen).

377. Porot, A. *La responsabilité pénale des sourds-muets*. (The penal responsibility of deaf mutes.) *J. de neur. et de psychiat.*, 1930, 30, 796-798.—The author raises the question whether deaf mutes can be held legally responsible and expresses the opinion that, due to the fact that their affective life is greatly impaired, they should be regarded as mentally deficient.—H. Sys (New York City).

378. Preuss, K. T. *Die Hochgottidee bei den Naturvölkern*. (Conceptions of a supreme deity among primitive peoples.) *Africa*, 1931, 4, 287-301.—(*Soc. Sci. Abst.* III: 16666).

379. Rodenwaldt, E. *Die Indoeuropäer Niederländisch Ostindiens*. (The Indo-Europeans of the

Dutch East Indies.) *Ons Nageslacht*, 1930, 3, 144-160.—This is a discussion of the social, psychological, and biological aspects of race mixture as represented by intermarriage between the (Malaysian and Melanesian) natives of the Dutch East Indies (Sumatra, Java, etc.), and the European (especially Dutch) settlers in the region. Intermarriage between the European settlers and Indo-European half-breed women is the rule there, and has been going on for 300 years. Socially and economically the children of these marriages rank almost with pure Europeans. The lower government positions are open to them, especially if they have had a European education, as many of them have. Children of marriages between Europeans and pure Indonesians have a less advantageous standing. Intellectually, Indo-Europeans have been able to profit quite fully by European education. The Indo-European hybrids, especially the women, show some distinctive biological traits, although the precise nature of their inheritance is confused by the varying degrees of purity of stock. They are usually taller than the Indonesian parent, but smaller-boned, slenderer, and of darker complexion than the European settler. The round, flaring Indonesian nostrils are also dominant. In general, the Indonesian offers a large and interesting field for Mendelian and eugenic study.—E. M. Pilpel (New York City).

380. Ronhoor, J. H. *Woman in primitive mother-right societies*. New York: Van Riemsdyck, 1931. Pp. 541. \$5.00.—(Not seen).

381. Rumyanek, J. *The comparative psychology of Jews and non-Jews: a survey of the literature*. *Brit. J. Psychol.*, 1931, 21, 404-426.—This essay attempts to collate the judgments that have been passed on the psyche of the Jew, especially on his intelligence. A critical examination is made of some of the intelligence and emotional tests that have been applied, and the view is expressed that the claim of workers with intelligence tests to be able to reveal innate psychological differences among different groups has in no way been substantiated, and that although the Jew may be intellectually superior and may possess unique psychological faculties, there is no technique at present in existence for their evaluation. A long bibliography accompanies the paper.—M. Drury-Smith (Cambridge, England).

382. Schmiedeler, E. [Ed.] *Readings on the family*. New York: Century, 1931. Pp. viii + 525. \$2.75.—This symposium of forty-three readings includes extracts from the writings of Pope Leo XIII, J. M. Cooper, E. R. Groves, P. Popenoe, John A. Ryan, and others. The three main divisions of the book treat family integration, family disintegration, and family re-integration. The chapter headings follow the editor's *An Introductory Study of the Family*. Scientific-sociological and religious points of view are discussed. The volume is one of the Century Catholic college texts.—E. R. Hildgard (Yale).

383. Smith, H. L., & Kreuger, L. M. *The psychology of human relationships, individual and so-*

cial. *Bull. School Educ., Indiana Univ.*, 1931, 7, No. 4. Pp. 103.—(*Soc. Sci. Abst.* III: 18114).

384. Spaeth, L. M. *Marriage and family life among strange peoples; studies of actual savage life.* Chicago: Rockwell, 1931. Pp. 112 \$1.25.—(Not seen).

385. Thomas, C. Results of the Sims socio-economic rating scale when given to delinquent and non-delinquent juveniles. *Amer. J. Orthopsychiat.*, 1931, 1, 527-539.—The Sims scale was given to a total of 580 boys and girls, 205 of whom were in the Detention Home, and 375 from schools of two neighboring towns. Results indicate: (1) that a markedly higher average score is made by the non-delinquent group; (2) that on 6 questions the non-delinquent was as much as 20% superior to the delinquent group; (3) that the difference between ratings of native-born and foreign-born children is not as great as that between delinquents and non-delinquents; and (4) that the superiority of rating of the non-delinquent group over the delinquent group is greater in grade school than in high school.—H. Peak (Yale).

386. Tiffin, J. Some aspects of the psychophysics of the vibrato. *Psychol. Monog.*, 1931, 41, No. 4. *Univ. Iowa Stud. Psychol.*, No. 14, 153-200.—The apparatus used, a siren disc which intercepted a beam of light falling on a photo-electric cell, produced a synthetic vibrato with separate controls for its rate, frequency fluctuation, amount of fluctuation in energy, and the phase relationship, frequency-energy. A group investigation disclosed individual differences in the ability to hear a frequency vibrato and an energy vibrato, with the two showing a fairly high correlation; it showed little indication of a relationship between pitch discrimination and the ability to hear a frequency vibrato at seven pulsations per second, or between discrimination of intensity and an energy vibration at this rate. A series of individual tests made on five trained observers yielded further results.—F. A. C. Perrin (Texas).

387. Todd, T. W. Culture conflict and delinquency. III. Culture conflict and physical inadequacy as bases for misconduct. *Soc. Forces*, 1931, 9, 497-499.—(*Soc. Sci. Abst.* III: 18222).

388. Tönnies, F. *Uneheliche und verwaiste Verbrecher. Studien über Verbrechertum in Schleswig-Holstein.* (Illegitimate persons and orphans among criminals. Studies on criminality in Schleswig-Holstein.) *Krimin. Abhandl.*, 1930, No. 16. Pp. 48.—(*Soc. Sci. Abst.* III: 18223).

389. Travagli, F. *Ruralizzazione e urbanesimo.* (Ruralization and urbanism.) Milan: Riv. di terapia mod. e med. pratica, 1931. Pp. 88.—Discusses the hygienic and social reasons which favor ruralization as opposed to urbanism.—A. Augyal (Turin).

390. Vervaeck, L. *La loi de défense sociale à l'égard des anormaux.* (The law of social defense in regard to abnormal persons.) *J. de neur. et de psychiat.*, 1931, 31, 7-46.—On the basis of statistics of interned criminal, mentally disordered individ-

uals, giving the proportion of the various crimes for which they were convicted and the percentage of curables and incurables, the author discusses the advantages and shortcomings of the new law of social defense introduced in Belgium. From the legal point of view there exist three classes of abnormal persons: (1) those mentally diseased and demented; (2) those mentally unbalanced, subject to mental upsets (constitutional psychopaths); (3) those mentally deficient (oligophrenics). The author does not believe that the definitions of the various types of mental diseases used in the recently promulgated law are practical and to the point. He believes that an alienist should state only whether an individual "is or is not" in a state of dementia or severe mental deficiency, or so mentally unbalanced that he is incapable of controlling his actions. He discusses the legal provisions for psychiatric observation and recommends facilities for having a defendant examined immediately, before the psychotic state in which the crime was committed may have passed. He praises the installation of psychiatric departments in prisons (*Panneux psychiatriques des prisons*). Internment under the law of social defense is not a penalty but a measure of medical treatment and social prophylaxis; the law is based on the principle that the accused person who is considered abnormal is to be treated as a patient and not as a delinquent. The maximal duration of internment will be 5, 10 or 15 years, and if the patient has not been cured before the end of his term, a second term can be prescribed by the authorities with the reservation that he may at any moment be liberated if his condition warrants it. After discharge, however, the patient should remain under some psychiatric control, for instance under the supervision of a mental hygiene dispensary. The author suggests that the institutions for the detention of abnormal persons under the law of social defense should not limit themselves merely to social preservation but should offer individual treatment and education inspired by the most modern scientific methods of psychotherapy. As a rule there persists in abnormal, unbalanced and deficient individuals a more or less active sense of moral and social responsibility, and it should be the task of the governmental institutions to provide for such treatment which will allow the patient to look forward to a readjustment in life when again at liberty.—H. Sys (New York City).

391. Villamor, I. *Habitual delinquency.* *Philippine Law J.*, 1929, 9, 49-50.—(*Soc. Sci. Abst.* III: 18224).

392. Wiggam, A. E. *Sorry but you're wrong about it.* Indianapolis: Bobbs-Merrill, 1931. Pp. 330. \$3.00.—(Not seen).

393. Williams, H. M. An objective aid in the standardization of verbal directions. *J. Genet. Psychol.*, 1931, 39, 289-293.—The influence of expressive factors on meaning in verbal directions is great; and by the use of phonophotographic devices, such as Metfessel's strobophotograph, some of these can

be experimentally checked, especially the pitch and time factors.—*J. F. Dashiell* (North Carolina).

394. Winterstein, A. Das Erlebnis der Schönheit. (The experience of beauty.) *Psychoanal. Bewegung*, 1931, 3, 112-120.—A discussion of H. Sachs' viewpoint, as expressed in his *Imago and Art and Personality*, relative to the place of the super-ego as furnishing a motive for creative effort. He finds the source of the love of the beautiful in a self-love, a narcissism. He discusses the struggle between the manic and the depressive periods in the artist personality as the conflict between the ego and the super-ego. The thrill of activity manifests the paternal element, the inferiority feeling the maternal element in the artist.—*A. B. Herrig* (Michigan Central State Teachers College).

395. Wirth, L. Culture conflict and delinquency. I. Culture conflict and misconduct. *Soc. Forces*, 1931, 9, 484-492.—(*Soc. Sci. Abst.* III: 18226).

396. Zbinden, H. Psychologie des Unglaubens. (Psychology of lack of faith.) *Psychol. Rundschau*, 1931, 3, 132-140.—The author admits the modern tendency to religious doubt, and shows the attitude that religion and psychology have taken to each other. He comments on some of the contributions that were made at the International Congress of Psychology of Religion held in May at the University of Vienna, where the subject was handled from every angle, practical as well as theoretical, with considerable emphasis on the religious training of youth. Several statistical studies were presented.—*A. B. Herrig* (Michigan Central State Teachers College).

397. Zelenin, D. M. Die religiöse Funktion der Volksmärchen. (The religious function of fairy tales.) *Int. Arch. f. Ethnol.*, 1930, 31, 21-31.—(*Soc. Sci. Abst.* III: 16667).

[See also abstracts 55, 223, 231, 245, 247, 266, 283, 288, 304, 311, 312, 442, 443, 448, 449, 452, 467, 474, 484, 485, 486, 487, 488, 497, 501.]

INDUSTRIAL AND PERSONNEL PROBLEMS

398. Ach, N., Düker, H., & Lubrich, W. Experimentell-psychologische Untersuchungen der Brauchbarkeit von Strassensperrschildern. (Experimental and psychological investigation of the usefulness of traffic signs.) *Psychotechn. Zsch.*, 1931, 6, 97-105.—Two systems of traffic signs, a national and an international, were compared as to (1) their visibility or recognizability in normal as well as in subnormal illumination, and (2) the ease with which the different signs are understood and remembered. The tests were performed in the laboratory and in actual outdoor situations. The laboratory tests consisted of tachistoscopic measurements, the aim of which was to determine for each sign the exposure time necessary to obtain correct perception. It was found that both systems, the national, which consisted of black and white arrows with written directions, and the international, made of red and green disks which contained pictorial signs, possessed certain advantages.

The national system is much more easily recognized than the international, while the latter can be more quickly learned and more easily remembered. As a result of these findings a new system of traffic signs was developed, in which favorable points of both the old systems were combined. An experimental test of this new system showed that its usefulness was greater than either of the others.—*C. Burri* (Chicago).

399. Allen, E. P. The selection of engineering apprentices. *J. Nat. Instit. Indus. Psychol.*, 1931, 5, 379-384.—This paper is a summary of a report to the educational committee of the city of Birmingham (England), entitled *Selection of Skilled Apprentices for the Engineering Trades*, by E. P. Allen and P. Smith. The experiment on which the report was based was made in conjunction with the National Institute for Industrial Psychology; its object was to find tests suitable for the selection of boys with ability to profit by further training in engineering. The qualities to be sought were intelligence, mechanical aptitude, mechanical ability and manual dexterity. Fifteen tests were selected and given to seven different groups of subjects. From the results one could compare the effects of different types of educational training on the boys' efficiency in the tests. It was also possible to discover whether the test results and the instructors' rankings were in accordance. Eventually seven out of the fifteen tests were chosen as most likely to prove of predictive value in selecting for apprentice ability. A description of these tests is given. The type of temperament chart used in conjunction with the tests is also explained, and the effects of different kinds of educational training discussed.—*M. Drury-Smith* (Cambridge, England).

400. [Anon.] Bericht der Tagung der Schweizerischen Stiftung für Psychotechnik in Magglingen. (Report of the meeting of the Swiss Psychotechnical Foundation at Magglingen.) *Indus. Psychotechn.*, 1930, 7, 315-318.—The central topic of the conference was the place of systematic observation in the psychological examination.—*A. W. Kornhauser* (Chicago).

401. [Anon.] Die behördlichen psychotechnischen Einrichtungen in Deutschland. (Official psychotechnical arrangements in Germany.) *Indus. Psychotechn.*, 1930, 7, 339-352.—A sketch is given of the extensive use of psychological procedures in German governmental enterprises, national and local—especially for vocational selection and vocational guidance. A supplement presents a classified list of the psychotechnical laboratories throughout Germany, with the name of the head in each place, the nature of the work, and an estimate of the number of examinations given in a year.—*A. W. Kornhauser* (Chicago).

402. Engel, R. Arbeitstechnische Grundbegriffe der Fertigung. (Basic concepts of production from the standpoint of work technique.) *Indus. Psychotechn.*, 1930, 7, 280-303.—A theoretical analysis is

given of the individual's movements and the types of production process in hand work. Characteristics of a number of different kinds of work are tabulated. The author also discusses the causes of variation in work performance and the need for extra time allowances due to both subjective and objective factors.—*A. W. Kornhauser* (Chicago).

403. Ford, A. *A scientific approach to labor problems*. New York: McGraw-Hill, 1931. Pp. 446. \$4.00.—Unemployment produced by increased efficiency through industrial psychology or similar measures is not necessarily permanent. There should be coordination of activity of production measurement, management, and personnel research. The problems involved are enumerated. Production measurements may be made by mechanical devices such as counters or graphic recorders, rating scales, or indirect criteria. Dangers in rating scale procedure are mentioned, such as the halo, lack of knowledge, and the varying reliability of the scale for different traits. Various types of scales are mentioned, such as percentage, man-to-man and five-point. Among the indirect criteria of measurement, trade tests are discussed. Motion study and job analysis promote efficiency. In connection with remuneration we must consider restriction of production and learning curves. Training foremen may well utilize the project method; the difficulty of training men taken from the ranks is stressed. Actual job education for the workers may take place in trade school, vestibule school or perhaps with laboratory methods, as is done in the case of sub-station operators. Fatigue involves decreased efficiency and chemical changes in the organism. Psychological factors are also present, especially in the field of attention, but in the last analysis there is no distinction between physical and mental fatigue. The problem of monotony is raised in this connection. Relief from fatigue may be secured through change of work and through sleep. Adequate ventilation is desirable, likewise illumination. In the latter connection we must consider the intensity, the distribution, and the possibility of monochromatic light. Noise is undesirable, particularly a change in noise. In the interest of accident prevention, we should teach carefulness, be on our guard against emotional instability, and consider attention and fatigue. Employee service and welfare work protect employees from outside exploitation. Labor turnover may be voluntary, due to discharge, or unavoidable. Common clinical types sometimes produce industrial maladjustment. For selecting employees a central employment department is recommended and its organization suggested. Interviews may be conducted by a foreman or a professional interviewer. Typical job analyses, such as should be available, are presented. The interview may be standardized to the extent of having certain things to look for. Trade tests are useful in certain situations, likewise tests of natural aptitude, such as intelligence and some of the typical sensory discrimination tests. Efforts at judging character have been

made, particularly through considering biographical data. A warning is sounded against psychological frauds, such as character analysis and memory training. Forms for personnel records and for securing recommendations in somewhat objective forms are suggested. The second part of the book deals with the statistical methods used in personnel procedure, such as frequency distribution, mean, standard deviation, correlation, partial correlation, and the use of computing machines and punch card systems.—*H. E. Burt* (Ohio State).

404. Fox, C. B. *Industrial psychology applied to the blind*. *J. Nat. Instit. Indus. Psychol.*, 1931, 5, 334-343.—This paper gives an account of the attempts of the National Institute of Industrial Psychology to help the blind to become useful and effective members of the community. Examinations were made as to the possibility of employing blind persons in occupations other than those conducted in blind workshops, and a list was made of additional occupations which it was believed the blind might usefully follow. Experiments as to the suitability of employment on a repetitive factory process were made, and tests were devised for determining the manual dexterity of the blind workers. The object of the tests was to determine what rôle the degree of vision played, since it was found that the output of the partially blind was superior to that of the totally blind. The tests of dexterity showed that differences in age had some influence upon degree of skill, that the difference between the partially blind and the totally blind was very marked in three out of the four tests, and that for both partially and totally blind differences due to occupational training were significant. An investigation was also made in some of the blind workshops to discover whether the various classes of blind persons differed in earning capacity. It appeared that the maximum earning capacity for both sexes in the case both of the totally and partially blind tended to fall during the years 30-40. From the point of view of length of experience there seemed to be a general tendency for earning capacity to increase over a period of 10-11 years and thereafter to decrease. Large differences in favor of the partially blind were found when the earnings of these and the totally blind were compared. The paper also discusses an experiment in team work conducted in a basket-making department by the Institute, the object of which was to break down the introspective isolated state of the blind worker. Experiments were also tried in subdividing the basket-making work; the resulting output was found to be 25% higher than before. The importance of the right lay-out of material, and of the factory in general, to reduce waste in time and material is stressed and an outline is given of some work done in this connection. Suggestions for further investigation are made.—*M. Drury-Smith* (Cambridge, England).

405. Goldstern, —. *Psychotechnik in Rumänien: Fahrerprüfungen bei der Bukarester Strassenbahn*.

(Psychotechnology in Rumania: tests for motormen on the Bucharest street-cars.) *Indus. Psychotechn.*, 1930, 7, 313-315.—A brief description is given of the testing of motormen by Tomescu in Bucharest.—A. W. Kornhauser (Chicago).

406. Goldstern, N., & Putnoky, F. *Arbeitstechnische Untersuchungen über die Beleuchtung von Webstühlen.* (Investigations of the illumination of looms from the standpoint of work technique.) *Indus. Psychotechn.*, 1930, 7, 321-338.—A series of laboratory experiments on illumination was conducted in which the tasks were counting threads stretched close together and detecting defective threads. The investigators studied the influence of different systems of lighting, contrast, intensity, and distance between threads. The system of lighting, the methods of exposure, and the testing procedure were worked out with great care. Within the limits studied, better performance occurred with increasing luminosity, with greater contrast, with dark threads on light background (as against the reverse relationship), with greater distance between threads, and with lighting with shadows. The chief conclusion is that lights casting shadows are best for practical use on looms.—A. W. Kornhauser (Chicago).

407. Goldstern, N., & Putnoky, F. *Beleuchtung und Leistung am Webstuhl.* (Illumination and performance at looms.) *Indus. Psychotechn.*, 1930, 7, 353-372.—Laboratory research on loom illumination was followed by investigations in a weaving mill. The changes in lighting which were introduced resulted in increased output, fewer broken threads, and improved quality. The changes were principally in the intensity and the direction of the light. The new arrangement placed the lights to one side of the work surface.—A. W. Kornhauser (Chicago).

408. Haeberle, H. *Arbeitsplatzstudie beim Sortieren von Schriftstücken im Bürobetrieb.* (Study of the work-arrangement for sorting documents in an office.) *Indus. Psychotechn.*, 1930, 7, 304-305.—A girl was able to increase her speed of sorting papers alphabetically 33% with proper arrangement of sorting boxes.—A. W. Kornhauser (Chicago).

409. Hershey, R. B. Is industrial psychology making the most of the depression? *Personnel J.*, 1931, 10, 157-166.—The depression affords a unique opportunity for research in economical problems. These problems include how best to curtail a working force during a depression and how best to build up a force as conditions improve. Psychological problems may be approached similarly; e.g., what groups of workers feel the depression least, possibility of women and children getting employment, differences in age and skill. Workers may be divided into those employed permanently, those on part time and those unemployed. Typical cases of data which might be gathered for each class are presented in tabular form. For instance, we might study the possibility that employees produce more during the depression, due to the insecurity; health records might indicate why the death

rate seems somewhat low during the depression. Interviews will play a prominent part during such times and relief agencies can contribute substantially to case studies.—H. E. Burt (Ohio State).

410. Herwig, B. *Eignungsuntersuchungen von Kaufleuten und Beamten, zugleich ein Beitrag zur Methodik der Persönlichkeitsdiagnose.* (Aptitude examinations of salespeople and clerks, together with a contribution to the methodology of personality diagnosis.) *Indus. Psychotechn.*, 1930, 7, 225-243.—Eighteen tests are proposed, which taken together will indicate individual fitness for certain business positions. Several of the tests are new and several others are considerably modified forms of older ones. The tests are as follows: completion test; finding contradictions in a text (critical ability); planning an itinerary; organizing a series of tasks to be carried out; choosing which of several sales offers to accept; handling "ticklish" conversational situations adroitly (test given by telephone); several of the usual tests for memory and perception; several tests for distribution and concentration of attention (finding numbers, a directions test, copying verbal material and checking arithmetical computations simultaneously); and finally tests of reaction to repetitive work and work under pressure. Emphasis is placed on the careful qualitative analysis of test results and modes of response. Through all the tests the examiner observes and records evidence concerning personality traits and work habits. Examples are mentioned. The test procedure was checked by a follow-up study of 32 cases. Complete agreement was found in 26 of the 32 individuals.—A. W. Kornhauser (Chicago).

411. Hesse, K. *Die Heereseignungsprüfungen.* (Aptitude tests in the army.) *Indus. Psychotechn.*, 1930, 7, 372-378.—The author points out the need for better selective methods in the army and then briefly describes the use made of tests (unstandardized) in selecting officer material.—A. W. Kornhauser (Chicago).

412. Körner, E. *Stellung und Methodik der Konzentrationsprüfung im Rahmen der schuttpolizeilichen Eignungsprüfverfahren.* (The place and method of the concentration test in the aptitude testing procedure for policemen.) *Indus. Psychotechn.*, 1930, 7, 247-254.—Selective test procedures have been extended in recent years to almost all classes of policemen in Prussia. A composite personality estimate is sought; standards on separate tests are not feasible. The need is pointed out for a test of concentration. The best test for the purpose was found to be Moede's, with certain adaptations of procedure. This test also gives valuable indications of deficient mental energy and psychopathic tendencies.—A. W. Kornhauser (Chicago).

413. Kurtzig-Moses, R. *Eine Produktanalyse als Teil der Marktanalyse.* (A product analysis as part of a market analysis.) *Indus. Psychotechn.*, 1931, 8, 57-61.—The object of this investigation was to obtain an estimate of the German market for an Ameri-

can hair tonic. 480 samples were distributed among the German population, together with a questionnaire, containing questions on the merit of the tonic; the effectiveness of the wrapper; time and frequency of application; texture of hair; reasons for likes or dislikes of the hair tonic; and the results obtained from the use of the tonic. The analysis showed that in general men liked the product better than did women; however, women with dry hair seem to have been benefited by its use. On the basis of this analysis the product was put on the market as a tonic for dry hair and as a hair dressing aid.—*C. Burri* (Chicago).

414. Marbe, K. *Psychologische Gutachten anlässlich des Wiederaufnahmegesuchs im Eierprozess Jürges* (Elberfeld). (Psychological opinion with reference to the re-trial of Jürges's egg case.) *Arch. f. d. ges. Psychol.*, 1931, 82, 241-252.—An account of the tests instituted to determine the likelihood of eggs being broken when being tested for soundness.—*R. H. Waters* (Arkansas).

415. Moede, W. *Zur Psychologie des Zeitungslesers*. (On the psychology of newspaper readers.) *Indus. Psychotechn.*, 1931, 8, 61-64.—This article is a shortened report from a study which was published in the *Zeitungsvierteljahr* in 1930. By means of the questionnaire method and personal interviews 61 men and women were consulted as to the kind of newspaper they are reading; the time of reading, whether morning or evening; amount of time devoted to the newspaper; why the particular paper is read rather than another; price and appearance; whether the subscriber makes any personal contributions to the paper; the influence of the newspaper on the person's conduct; criticisms of the paper; personal interests; and finally suggestions for improvement. The investigations brought out factors concerning newspaper reading which are of considerable interest to any publisher, and suggest that greater emphasis should be placed upon psychological investigations of this sort.—*C. Burri* (Chicago).

416. Moore, B. V., & Hartmann, G. W. *Readings in industrial psychology*. New York: Appleton, 1931. Pp. xxxix + 560. \$5.00.—The book is intended to provide students in engineering, business administration, and other technical courses, as well as all other persons interested in industrial psychology, with a comprehensive picture of the field. An introductory chapter on historical development precedes chapters on: basic principles (26 pages); popular versus scientific procedures in appraising men (51 pages, mostly constituting "edifying monuments of human folly"); techniques of personnel selection (34 pages); rating scales (18); mental tests and individual placement (46); analysis of occupational interests (29); vocational guidance (24); training the worker (29); efficiency and scientific management (35); fatigue and rest pauses (31); the working environment (24); accidents (28); monotony (23); morale: motivation and satisfaction in work (39); labor unrest and strikes (41); leadership and social adjustment

(30); distributing the product (24). Altogether there are some 220 articles, including about ten translations from foreign languages not already available in English. The isolated readings are "unified into a coherent sequence" by connecting passages written by the authors. The criteria of selection of articles were: "1. Basic conceptual contributions; 2. Reliability of writer; 3. Conciseness of style; 4. Adjustment to student level; 5. Inaccessibility." Each chapter is followed by a few questions for the student to answer. The volume contains short biographies of 65 authors prominent in the field of industrial psychology. The 12-page index includes names of contributors. Quotations as late as 1930 are contained in the extracts. The manner of treatment of a chapter may be illustrated as follows: technique of personnel selection, divided into (A) basic principles of selection and placement; (B) job analysis and job specification; (C) applications and records as aids in selection; (D) the employment interview. (Contributors such as Bingham, Freyd, Burt, Anderson.) Another illustration is the chapter on training the worker, divided into: (A) organization of industrial education; (B) economical methods of instruction; (C) results of training. (Contributions by such writers as Link, Pear, G. C. Myers, Berling, Scott and Clothier, Gilbreth.)—*O. L. Harvey* (Cambridge).

417. Nier, M. *Der Mensch als Wirtschaftsfaktor im Verkehrsbetriebe: seine Eignung und Anlernung*. (The human being as an economic factor in traffic management; his aptitude and training.) *Indus. Psychotechn.*, 1931, 8, 33-52.—This paper is mainly concerned with a discussion of the factors which make street car motormen economically profitable; a driver, in order to become economically profitable, must not only have aptitude to drive, but must also be furnished with good material to work with. In addition he must be able to drive in such a way that the least amount of electricity is consumed, and yet have the fewest possible accidents. An economically profitable driver, then, is one who most effectively produces the best interaction between these subjective and objective factors. Finally the author develops an algebraic equation with which he can determine the relationships of situations which will bring him optimum results with minimum expenditure of energy.—*C. Burri* (Chicago).

418. Percy, E. *From school to work*. *J. Nat. Inst. Indus. Psychol.*, 1931, 5, 376-378.—This paper points out that one of the most important tasks of industrial psychology in England is to insure that persons are engaged only upon work for which they are fitted. The increasing proportion of retired to active workers make an increase in individual productive capacity essential. The growing specialization in industrial tasks involves the danger that a person inefficient in his first job will be thrown permanently out of employment; to avoid this a deliberate linking between education and vocational requirements is advocated, supplemented by more accurate methods

of vocational guidance.—*M. Drury-Smith* (Cambridge, England).

419. Poppelreuter, W., & Mathieu, J. Die Einhebelsteuerung von elektrischen Fördermaschinen. (The one-lever control of electric mine-elevators.) *Indus. Psychotechn.*, 1930, 7, 378-381.—The authors defend and amplify the conclusions published by Graf (IV: 1258) in favor of the single-lever control. The results had been attacked by Hochreuter (V: 4564).—*A. W. Kornhauser* (Chicago).

420. Rowntree, S. Some industrial problems of today. *J. Nat. Instit. Indus. Psychol.*, 1931, 5, 370-375.—A brief outline is given of the steps by which Great Britain has lost her industrial supremacy, and of the handicaps under which her industry is laboring. To compete successfully in world markets efficiency must be increased. This involves the elimination of waste both human and material, and here industrial psychology can help. The importance of vocational selection, incentive systems, environmental conditions and advertising is discussed; examples are drawn mainly from the experience of the writer's own company.—*M. Drury-Smith* (Cambridge, England).

421. Schoenrich, E. The United States' Foreign Service as a career. *Washington College Stud. Vocations*, 1930, No. 2. Pp. 6.—Describes the prerequisites for entrance into the foreign service, the scope of the examinations to be passed, the salary to be expected, and the duties involved in such a career.—*J. C. Spence* (Clark).

422. Schulte, R. Eignungsprüfung, Arbeitserleichterung, Ermüdungsminderung für die Arbeit an Buchungsmaschinen. (Aptitude tests, labor facilitation, and lessening of fatigue in work on bookkeeping machines.) Berlin: Borcherts Verlag für Schreibmaschinen-Literatur, 1931. Pp. 48.—A series of tests was devised to determine the qualifications needed for good work on bookkeeping machines. These were of the clerical type, crossing out tests, etc., and determined both the speed and accuracy of the subject. There were also questionnaires dealing with such things as the differences between work on calculating machines and on typewriters. The causes of fatigue were studied and measurements were made for furniture which would be best fitted for eliminating physical fatigue. The effect of different lengths of rest periods coming at different intervals of time was also noted. A bibliography is attached.—*D. S. Oberlin* (Bryn Mawr).

423. Scott, W. D., Clothier, R. C., & Mathewson, S. B. Personnel management. (Rev. ed.) New York: McGraw-Hill, 1931. Pp. 583. \$3.50.—The book is in two parts. The first deals with personnel management "applied to the individual." It has largely the same chapters as in the first edition, but the material of two chapters on tests is combined and a similar procedure followed with reference to follow-up work. Part II on personnel management "applied to the group" involves considerable new

material on such matters as insurance, employee representation, and safety.—*H. E. Buritt* (Ohio State).

424. Stoutemyer, J. H. The psychology of the table of contents. *J. Educ. Res.*, 1931, 24, 227-230.—Study of the tables of contents of 55 journals in education and allied fields; consideration of its place of appearance in a journal, its legibility, and the placement of the names of contributors.—*S. W. Fernberger* (Pennsylvania).

425. Strong, E. K., Jr. Change of interests with age. Stanford University: Stanford Univ. Press, 1931. Pp. xix + 235. \$4.00.—The author's vocational interest blank was given to 2,340 men ranging in age from 20 to 59 years. The subjects were classified as engineers, lawyers, insurance men, ministers, physicians, school men, writers, and Y. M. C. A. secretaries. The split-half technique yields an average reliability coefficient of .86. The results show that "older men are no more catholic in their interests than younger men; they have as many likes and dislikes as younger men, but their likes and dislikes are not identical with those of younger men." The average item shows a change of approximately 15% between the ages of 25 and 55. There is no uniform change in interests with age, but "50 per cent of the total change occurs between 25 and 35, 20 per cent between 35 and 45, and 30 per cent between 45 and 55. There is little or no change from 55 to 65." Data on changes in interest from decade to decade show such changes to be slight. The differences represented by occupational interests are greater than age differences. "Items suggesting physical skill and daring, as 'walking along the edge of a precipice' or 'being an aviator,' show the greatest change of all. Older men do not like such activities as do young men." Older men show dislike when confronted with items suggesting change of established modes of behavior. Liking for occupations shows a decrease with age. Reading interests increase with age, but linguistic interests decrease. Older people prefer amusements enjoyed in isolation, while the younger prefer social amusements. With increase of age one finds an increase in liking for people with desirable traits. "Although there is a great variety of reactions to items describing working conditions, there seems to be no possibility of summarizing them in terms of the interests of men at different ages." Bibliography and 77 tables.—*N. L. Munn* (Pittsburgh).

426. Taylor, W. D., Jr. Vocational information; a study showing the vocational opportunities obtainable through the academic channels of the University of Washington. Seattle, Wash.: Univ. of Washington, 1931. Pp. 158. \$.50.—(Not seen).

427. Tomaschewski, W. Leistungsstudien in einem Stücklistenbüro eines Grossbetriebes. (Studies of work performance in the piece-rate department of a large industry.) *Indus. Psychotechn.*, 1930, 7, 306-313.—Large gains in efficiency were achieved in office operations on the basis of detailed job analyses.—*A. W. Kornhauser* (Chicago).

428. Tramm, K. Alter und Leistung. (Age and performance.) *Indus. Psychotechn.*, 1930, 7, 284-286.—The writer stresses the need for studying the problem of the worker over forty.—A. W. Kornhauser (Chicago).

429. Tramm, R. A. Unser Verhalten bei Verkehrsgefahren. (Our behavior in traffic dangers.) *Indus. Psychotechn.*, 1931, 8, 53-57.—Tramm maintains that it is not sufficient merely to indicate dangers by placing danger signals, but that we should teach people how to behave in dangerous situations in order that they will be able to do the right things, and without breaking down emotionally.—C. Burri (Chicago).

430. U. S. Adjutant General's Office. The United States Army as a career. Washington, D. C.: Gov't Printing Office, 1931. Pp. 36.—(Not seen).

431. Vernon, M. D. Characteristics of proof-reading. *Brit. J. Psychol.*, 1931, 21, 368-381.—It was shown earlier by the writer that there is a close relation between variation in the eye movements and fixation pauses in normal reading and the underlying mental processes. The aim of this experiment was to study the eye movements of professional proof-readers in reading normal material and material containing misprints, in the hope of obtaining some information as to their methods and abilities; these could be compared with the eye movements of non-professionals, and Crosland's theory as to the unusual length of the fixation pauses of proof-readers could be tested together with the importance to the accurate proof-reader of natural accuracy of eye movement and fixation. It was found that the average reading time per line and the number and duration of the fixation pauses of proof-readers were much the same as other subjects in normal reading, but the standard deviations of reading time and number of pauses and the number of regressions were considerably less in the case of the proof-readers. In misprint material the proof-readers' time per line and number of regressions increased much less than for the other subjects, but during the subsequent reading of material free of misprints, the proof-readers' increase was maintained whereas the other subjects' was not. The experimenter concluded that proof-readers were able to adopt and indefinitely to maintain an attitude or mental set towards reading material with misprints of such a nature that the general meaning of the content was relegated to the background, the center of consciousness being occupied with the recognition of small details of the structure of letters and words.—M. Drury-Smith (Cambridge, England).

432. Vigliani, A. Competenze e limiti nella selezione della mano d'opera industriale. (The uses and limits of the vocational test for industrial work.) *Rass. di med. applicata al lavoro industriale*, 1931, 2, 67-75; 134-141.—The author discusses some general questions on selection and education for industrial work, giving special consideration to the Italian applications. The author upholds the view that the

exercises mentioned should be trusted to specialized physicians only.—A. Angyal (Turin).

433. Walther, L. Die Arbeitspsychologie. (Industrial psychology.) *Psychol. Rundschau*, 1931, 3, 150-156.—A discussion of the mode of selection of workers for specific types of work. The author contrasts the difference between the two attitudes of vocational advice and vocational selection, the former having the individual in mind, the latter the needs of the vocation. The latter demands a fine analysis of the characteristics needed for success, by inquiry, by observation, and by experimentation. The procedure of each of these in vocational analysis is discussed.—A. B. Herrig (Michigan Central State Teachers College).

434. Walther, L. Die Arbeitspsychologie. (Industrial psychology.) *Psychol. Rundschau*, 1931, 3, 177-180.—The author cites experience in two types of purely mechanical procedure in factories where through vocational tests the ability of workers was discovered. A high correlation was found between these results and actual accomplishment in the factory. He presents statistical tables and comments on them, bringing out the reliability of such vocational tests.—A. B. Herrig (Michigan Central State Teachers College).

435. Wolter, K. K. Zur Psychologie des menschlichen Unfalls. (The psychology of human accident.) *Psychol. Rundschau*, 1931, 3, 184-186.—Personality characteristics play a large part in accidents. It is not a matter merely of one characteristic, intelligence, for instance, but rather of a combination that makes one person more susceptible than others. The author explains several factors that play a part.—A. B. Herrig (Michigan Central State Teachers College).

[See also abstracts 253, 522.]

CHILDHOOD AND ADOLESCENCE

436. Beck, S. J. The Rorschach test in problem children. *Amer. J. Orthopsychiat.*, 1931, 1, 501-511.—The personalities of 37 problem children of similar age, environment and economic level were measured by the Rorschach test and the results compared with the clinical findings on these cases. In three cases "the results could not be considered substantiated by clinical findings." "A principal conclusion is . . . that, as indicated by the Rorschach test, a great majority of a group of problem children . . . are likely to be suffering from anxiety attitudes, which are damaging a portion, if not the entire, of their psychic apparatus."—H. Peak (Yale).

437. Binnewies, W. G. A study of the social, vocational, and educational problems of college girls. *J. Educ. Sociol.*, 1931, 5, 82-88.—Interviews were held with 80 college girls in an effort to learn just what problems were troubling them. School subjects and timidity were the most frequent sources of difficulty in both high school and college. Various possible remedies were suggested; assistance of instructor

was most effective for the former, and getting acquainted and forcing oneself to speak in class for the latter. Of these girls 46% reported having chosen their vocations without assistance from anyone.—*F. D. McTeer* (Detroit City College).

438. Blatz, W. E., & Bott, H. M. The management of young children. New York: Morrow, 1930. Pp. 366. \$3.00.—(Not seen).

439. Cunningham, B. V. An intelligence test for parents. *Indiana Bull. Charities & Corrections*, 1931, No. 193, 280-284.—(*Soc. Sci. Abst.* III: 18300).

440. Davenport, C. B., & Minogue, B. M. The intelligence quotient and the physical quotient: their fluctuation and intercorrelation. *Human Biol.*, 1930, 2, 473-507.—Sequential yearly physical quotients and intelligence quotients were obtained on 61 to 71 boys at an institution for the feeble-minded. Physical quotients were found by dividing physical age by chronological age. The average physical age for each child was determined from data on dehiscence and eruption of teeth, development of pubic and axillary hair, vertex height, span, sitting height and annual increments in weight. The correlations between PA and MA for each chronological age 9 to 13 inclusive, 39 to 55 cases, were $.237 \pm .091$ to $.483 \pm .074$. Between PQ and IQ the correlations for 61 to 71 cases for each of five years ranged from $.289 \pm .079$ to $.409 \pm .065$. Both the PQ's and IQ's decreased slightly with age.—*B. Wellman* (Iowa).

441. Decroly, O. Les enfants surdoués. A propos d'un cas de précocité intellectuelle. (Over-endowed children. With regard to a case of intellectual precocity.) *J. de neur. et de psychiat.*, 1930, 30, 890-893.—Researches by means of intelligence tests and information regarding environment and character have made it possible to establish a definite physical, psychological and characterological picture of precocious children. The author was able to verify this in the case of a boy of five who came under his observation. He concludes that in order to secure exact information it is necessary to supplement the verbal test by an examination of non-verbal aptitudes, and that from the standpoint of education such aptitudes must be given an opportunity to develop along with verbal accomplishments.—*H. Sys* (New York City).

442. Della Valle, G. Le prime fasi dello sviluppo del linguaggio infantile. (The primary phases in the development of language in children.) *Riv. ped.*, 1931, 24, 1-35.—After giving a full outline of the historical course of child psychology from the time of Comenius down to the present day, the author discusses the principal methodological postulates necessary for a scientific study of the psychological development of the child. He studied the language development of a child up to the age of 27 months, and he gives the results of his research, which is based on the annotations made by the parents. He applies to the child's rudimentary expressions the same categories of phonetics, syntax, lexicography,

and logic which science uses in its research in regard to antique and modern literary languages, living and dead dialects, or the primitive languages of savage people. According to him, inductions can be drawn from these records which are very important for the solution of the controversial problems of the formation of self-consciousness, the relation between external observation and introspection, the genesis of esthetic and moral evaluations, the fundamental categories of language and thought, intuition of time and space, the relations between subject and predicate in attributive and subsumptive judgments, etc.—*M. Ponso* (Turin).

443. De Sanctis, S. I minorenni travati. (Neglected children.) *Scuola pos.*, 1931, 39, 137-138.—Description of the agency proposed by De Sanctis as a center of information and study of delinquent children, etc., for the moment only national. The new center of study will have as official organ *La Scuola Positiva*.—*G. C. Ferrari* (Bologna).

444. Dowell, P. S., & Garrison, K. C. A study of reading interests of third grade subjects. *Peabody J. Educ.*, 1931, 8, No. 4.—This study attempts the solution of three problems: the elements of greatest interest to children of this grade, the favorite story in each of a selected group of approved texts, and how the preferences of bright and slow pupils compare as to quantity and quality. Data were secured from 109 children, classified in three sections in the same school. The results of the survey are tabulated. Kindness is the element ranking first in children's choices; bravery ranks second. No appreciable difference in attitude was discovered between children of widely varying social groups, although personal traits are revealed in the type of selections chosen, and in appreciations. The authors found a certain unity of interest to exist in the grades.—*E. V. Brill* (Malone, N. Y.).

445. Dunshee, M. E. A study of factors affecting the amount and kind of food eaten by nursery school children. *Child Development*, 1931, 2, 163-183.—3005 records of the food and eating habits of 37 nursery school children at the Institute of Child Welfare, University of Minnesota, were studied statistically to determine some of the factors affecting the amount and kind of food eaten by these children. The analysis showed that the older children ate more; the children who enjoyed their food ate more; while the children who spent the longer time at the table ate less. Eating was somewhat influenced by the child's attitude toward the adult attendant and by the length of nursery school attendance, though when age was held constant these factors became negligible. There was no significant correlation between the amount of food eaten and certain other factors as follows: season of the year; bodily activity; conversation or interest in other children or visitors during meal time; and method of training. Refusals of food occurred in only 2.23% of the cases; refusals of milk were least frequent, while those of desert were most often encountered. Dislike was most often mani-

fed for vegetables and least often for milk.—W. McTeer (Detroit City College).

446. Freistadt-Lederer, A. Älteste, jüngste, mittlere Kinder. (Oldest, youngest, middle children.) *Psychol. Rundschau*, 1931, 3, 157-160.—A case is cited of social misbehavior on the part of a young child, caused probably by jealousy of an older brother. The author advises parents as to treatment of children which will avoid building up undesirable behavior patterns. She discusses also the problems of the middle child.—A. B. Herrig (Michigan Central State Teachers College).

447. Gellermann, L. W. The double alternation problem: II. The behavior of children and human adults in a double alternation temporal maze. *J. Genet. Psychol.*, 1931, 39, 197-226.—38 children of ages 3 to 13 and 25 adults were tested on the double alternation problem in a temporal maze built large enough for human subjects but identical in essentials with that used with monkeys (see V: 3395). All subjects were ignorant of the nature of the experiment, and were given no verbal instructions; their training differed from that of the monkeys only in that motivation was supplied in verbal form ("Keep moving"), instead of hunger and electric shocks, and in that they were given all necessary trials in a single period instead of one per day. The human subjects mastered the problem in 1 to 37 trials—much more quickly than monkeys, raccoons, or rats had done. They exhibited the same general stages of learning as did the monkeys: a random stage of extraneous moves, a stage of regular running, and a stage of hesitations (and verbal responses); but they showed more tendency to simple alternation than did the other three species and less evidence of direction tendency. Human subjects formulate their final solution in verbal terms; and (except for the youngest) can extend their mode of solution beyond the original length of problem. The form of behavior dealt with is "typically human," being apparently quite different from that found in ordinary habit formation of the maze type, where the four animal types would fall into a different order of learning efficiency.—J. F. Dashiell (North Carolina).

448. Grandprey, M. B. The determination of the musical capacities of young children. *Music Superv. J.*, 1931, 18, 36.—A study was made of the responses to music of 25 nursery school children between the ages of 2 and 5. Attempts were made to rate their abilities in the fields of rhythm, time, intensity and singing ability, as well as their general responsiveness to music. This last correlated $.62 \pm .09$ with the musicality of the home environment. No other estimate correlated to any extent with home environment or with intelligence. Profiles are presented.—P. B. Farnsworth (Stanford).

449. Harlow, S. B. What war does to the minds of children. *World Tomorrow*, 1930, 13, 488-490.—(See *Soc. Sci. Abst.* III: 18108).

450. Hicks, J. A. The acquisition of motor skill in young children: an experimental study of the effects of practice in throwing at a moving target. *Univ. Iowa Stud.: Stud. Child Welfare*, 1931, 4, No. 5. Pp. 80.—See IV: 4492 and V: 3514.—B. Wellman (Iowa).

451. Hurlock, E. B., & Newmark, E. D. The memory span of preschool children. *J. Genet. Psychol.*, 1931, 39, 157-173.—To study the memory span of preschool children and its possible relationship to intelligence, 10 varieties of tests were devised similar to those of Terman, Kuhlmann, Herring, and Whipple, and tried out with 20 kindergarten children whose intelligence scores had been determined with the Stanford Revision. Among the findings were: the digits backwards test is too difficult at this age; the digits forward test, memory for abstract words, and memory for concrete words correlate highly with IQ; recall is a better test for general memory ability than is recognition; the composite score for memory span tests is highly diagnostic of intelligence, showing a correlation of $+.82$.—J. F. Dashiell (North Carolina).

452. Isaacs, S. Contribution à la psychologie sociale des jeunes enfants. (Contribution to the social psychology of young children.) *J. de psychol.*, 1931, 28, 372-387.—A study of the social attitudes of children observed under various conditions in the Maltling House School in Cambridge. Egocentricity, ambivalence of attitude, and the feeling of inferiority as they manifest themselves in the group of children are described. There is a section on "the horde of brothers" in which the author stresses the Freudian implication of the close comradeship in the group of children and their hostility toward the introduction of parental influences.—N. L. Munn (Pittsburgh).

453. Jahn, H. Nervöse Kinder. (Nervous children.) *Dtsch. Schule*, 1931, 35, 412-416.—There is an increase of nervousness among children. Heredity and environment both enter into the determination of this tendency; causes usually date back to early infancy. The author gives a list of recognizable symptoms, and suggests the responsibility of parents with reference to them. He points to a cause in the vegetative nervous system, showing itself in early fatigue, headaches, faintness, etc. Symptoms change with various periods of life. Suggestions for treatment of the nervously stigmatized child are given.—A. B. Herrig (Michigan Central State Teachers College).

454. Johnson, B. A correction. *Child Development*, 1931, 2, 224.—A correction of certain errors which appeared in a table in the brief report. *Skill in Progressive Movements of Children*, by Johnson and Courtney, which appeared in *Child Development*, 1930, 1, 345-347.—W. McTeer (Detroit City College).

455. Jordan, G. B. Intimate interests of youth. Nashville, Tenn.: Cokesbury Press, 1931. Pp. 164. \$1.50.—(Not seen).

456. Kenderdine, M. Laughter in the pre-school child. *Child Development*, 1931, 2, 228-230.—From February to June 1931, record was kept of laughter on the part of the children enrolled in the Nursery School of Vassar College. These observations were made for an hour at a time at five different periods during the week. "The children . . . studied in this paper laughed most frequently at situations which involved motion of self; second, at situations which they realized were socially unacceptable; and third, at humorous situations." The differences in cause of laughter for the different age groups are presented, as are also the average number of laughs per individual in each age group. "The presence of other children does, for the most part, seem to be an essential element in the occurrence of laughter in children . . . although the mere presence of other children does not necessarily mean that there will be increased laughter." Those children having the higher IQ's are reported as laughing more frequently.—W. McTeer (Detroit City College).

457. Ketterlinus, E. Learning of children in adaptation to mirror reversals. *Child Development*, 1931, 2, 200-223.—The subjects, children in the Child Institute of Johns Hopkins University, ranged in age from two to five years and were divided into three age groups. There were 27 children in the first experiment (19 boys and 8 girls) and 22 in the second and third experiments. In order to ascertain whether such very young children could learn new eye and hand coordinations the following three experiments were devised: first, a simple task of picking objects up and putting them in a cup, the cup and objects being visible only in a mirror; second, an experiment with foot movements in which the subjects pushed a disc with the foot from one position to another, foot, disc, and goal seen only in a mirror; and third, an experiment in which the subjects pushed a toy cannon along a path guided by the pattern seen in a mirror. The author concludes that "children as young as two years acquire skill in tasks requiring new hand and eye coordinations in movements that are in opposition to those demanded in the ordinary environment. Young children learn such new habits more slowly than do adults, and learning proceeds more rapidly and more accurately as age increases. Age differences in adaptation to such situations as the mirror experiments present are closely related to the complication or increasing difficulty of the coordinations involved. Mirror experiments bring out emotional tendencies in children that merit consideration in the guidance of the child."—W. McTeer (Detroit City College).

458. Kiessling, A. Vom Geiste jugendkundlicher Einstellung. (The spirit of the youth-study movement.) *Dtsch. Schule*, 1931, 35, 513-519.—The past regarded the child as a small adult, the present finds in him a being different in degree and kind. Out of this recognition arises a new psychology, and pedagogy follows. Child psychology has developed in recent years into a youth psychology. Various psy-

chological viewpoints reveal themselves, differing with different schools of thought. The author holds that the "personal" viewpoint holds a central place today. The step from individuality to personality is significant. The later psychology sees the self as an entity, and *psyche* receives a new meaning.—A. B. Herrig (Michigan Central State Teachers College).

459. Lehman, H. C., & Witty, P. A. Further study of the social status of occupations. *J. Educ. Sociol.*, 1931, 5, 101-112.—The Lehman Vocational-Attitude Quiz was given to 26,878 school children between the ages of 8 and 19 years. Out of a comprehensive list of 200 occupations the children were asked to check those occupations in which they were willing to engage as a life work; they were then asked to indicate (1) the three occupations which they would like best to follow, (2) the one occupation which they were most likely to follow, (3) the three occupations which they believed were the best money-makers, (4) the three occupations which they believed were the most respected, and (5) the three occupations which they believed would require least effort. Physicians, bankers, and ministers were indicated in the order named as the most respected occupations. There were clearly defined sex differences with regard to some occupations: aviators had more prestige with the boys; nurses and teachers with the girls. The reports of esteemed occupations are appreciably influenced by the opportunity which the children have to follow these occupations. The results are compared with those of an earlier study.—F. D. McTeer (Detroit City College).

460. Lüneberg, T. Die seelische Einstellung des Jugendlichen während der Zeit der Entfremdung und Abwärtsentwicklung. (The mental attitude of youth during the period of alienation and negative development.) *Vjesh. f. Jugendk.*, 1931, 1, 207-213.—Using the case of a youthful murderer as a text, the author shows how alienation from parents and friends is brought about. He considers this negative development a more or less general phenomenon among present-day adolescents in the cities of middle Europe. The underlying causes are the loss of the parent-ideal, the longing for freedom from an inexplicable unrest, and the urge to assert themselves. Objective reality checks their development. Having lost authoritative leadership and a sense of security, they also lose self-understanding, take a negative attitude, separate themselves more and more from their friends and from moral values, and finally break with reality.—M. E. Morse (Catonsville, Md.).

461. Mabie, E. A study of the conversation of first grade pupils during free play hours. *J. Educ. Res.*, 1931, 24, 135-138.—Study of 32 pupils at the Hawthorne School, Madison, Wisconsin, during the free play periods for eight days. The results show that about 25% of their speech was virtually a monologue and so was not to be considered social conversation.—S. W. Fernberger (Pennsylvania).

462. McGraw, M. B. A comparative study of a group of southern white and negro infants. *Genet.*

Psychol. Monog., 1931, 10, 1-105.—By making a study of negro and white infants at least some of the well-known difficulties of data-interpretation are avoided. Language handicaps are not involved. Inaccuracies of date of birth are less than for older age groups. 60 negro and 68 white infants ranging in age from 2 to 11 months of age were selected at random from the infant population of Tallahassee, Fla. Many of the white infants had negro nurse maids. The babies' names were secured from the birth registry, obstetricians of the city, public school teachers, and a sort of house-to-house canvas in which "insignia of an infant in the home," such as diapers on the line and the like, were looked for. The shops on Saturday afternoon, particularly the ten-cent store, were "strategic locations for baby pick-ups." In some cases the mothers, not being scientifically disposed, had to be bribed into the loan of a baby by promises that the baby would be weighed and measured and that a kodak picture of the baby would be presented to the mother. Within two days of the monthly birthday, the infants were weighed, measured (body length and stem length), and examined by means of the Hetzer-Wolf "Babytest" (later published in translation in Bühler's *The First Year of Life*). There is no evidence that negro babies mature more rapidly than white babies. "In terms of developmental age, developmental quotient, and percentage of successful reactions, the white babies in this experiment are superior to the negro babies." "In general, the developmental level achieved by the negro babies appears to be about 80% as mature as that of the white babies. There is considerable overlapping in the ratings of the two groups, there being a greater difference between individuals within a group than there is between the means of the two groups examined." "The white babies also evince superiority in terms of height and weight . . . the underweight white babies are superior to the overweight negro babies." "It is significant that even with very young subjects when environmental factors are minimized, the same type and approximately the same degree of superiority is evidenced on the part of the white subjects as that found among older groups."—*F. M. Teagarden* (Pittsburgh).

463. Mengert, I. G. A preliminary study of the reactions of two-year-old children to each other when paired in a semi-controlled situation. *J. Genet. Psychol.*, 1931, 39, 393-398.—Two children at a time were taken into a small room and allowed to play with materials there, the observer making use of a screen and keeping running notes. Each child was paired with each of the nine others in the group. The notes were analyzed, and quantitative scores for friendliness-unfriendliness were derived. Scores for friendliness were high compared with scores for unfriendliness. The author feels that this study demonstrates a method valuable in reducing the number of variables in the observational method.—*J. F. Dashiell* (North Carolina).

464. Morf, G. Heilpädagogische Praxis. (The practice of remedial pedagogy.) *Psychol. Rundschau*, 1931, 3, 186-190.—A case brought to the clinic was that of a boy of thirteen who proved a great trial to his parents, continually resisting their wishes. The author diagnoses the difficulty, finding that the home had led to the described circumstances, namely the treatment of the youth as though he were a child and his consequent measuring up to this expectation. The advice given each parent and the boy and the help that came from following this advice are described.—*A. B. Herrig* (Michigan Central State Teachers College).

465. Myers, G. C. Building personality in children. New York: Greenberg, 1931. Pp. xv + 360. \$2.50.—Written for parents, the book gives concrete suggestions for helping children to acquire attractive traits of personality. The discussion deals with physical factors, clothing, posture, eyes, voice, and speech as each of these affects personality growth. In addition there are chapters dealing with the major personality problems which arise in child training—feelings of insecurity, dependence, timidity, escapes from reality, and "nervousness" or lack of emotional poise. The book is a treatment of the material of parent education; it is written in everyday language.—*F. D. McTeer* (Detroit City College).

466. Nystrom, G. H. A study of fifty home libraries with special reference to their function in child development. *Child Development*, 1931, 2, 230-233.—"The data for the study were gained through interviews with the mothers in their homes and through actual examination of the reading materials found in each family library. Morris, Illinois, a city with a population of 6,000, was chosen as the location of the survey. A total of 162 children was found in the 50 homes, ranging from homes with an 'only child' to homes with as many as 10 children. The average number per family was three." The libraries are studied with reference to the nativity, occupation and education of the parents; also, with reference to the number and variety of the newspapers, magazines and books which constitute the libraries. The author concludes the article with the suggestion that the study of the child in the home should include some reference to the reading interests and needs of the child as well as the consideration of his physical welfare. "There also seems to be urgent need for the re-writing of child study materials for various levels of educational background."—*W. McTeer* (Detroit City College).

467. Pelikan, A. G. The art of the child. New York: Bruce, 1931. Pp. 123. \$3.00.—An annotated series of pictures by children in grades 1 to 8, introduced by a statement of the author's philosophy of art teaching.—*R. R. Willoughby* (Clark).

468. Ross, B. M. Some traits associated with sibling jealousy in problem children. *Smith College Stud. Soc. Work*, 1931, 1, 364-376.—A statistical study based on data obtained from the case record index cards of the Institute for Child Guidance in

New York and of the clinics held for demonstration purposes by the Commonwealth Fund. The classifications were accepted at face value and no attempt was made to study the original case records. The data are analyzed so as to show comparisons: (1) descriptive of the patient, i.e., sex, age, IQ, number of children and ordinal position; (2) symptomatic behavior of the patient, such as negativism, fears, sensitiveness, inferiority, fatigability, speech defects, and running away from home; and (3) parental attitudes, mother protection, unfavorable comparison and mother nagging. These data are given in eight tables. Jealousy seems to occur in a slightly larger proportion among girls than among boys, and tends to appear in the earlier ages of childhood. It is somewhat more frequent among bright than among dull children. A larger proportion of jealous than of non-jealous children were first born, particularly in two-child families.—(*Soc. Sci. Abst.* III: 18111).

469. Rowe, A. W. A possible endocrine factor in the behavior of the young. *Amer. J. Orthopsychiat.*, 1931, 1, 451-475.—Of 650 patients under 17 years of age 274 show evidence of endocrine disorder; 276 are classified as non-endocrine. Of the former group 306 have no behavior problem; 68 present a behavior problem. Of the non-endocrine group, 240 have no behavior problem, and 36 show a behavior problem. The present study examines 104 patients, the total group with behavior problems, of whom 68 show endocrine disorder and 36 show none. On the basis of this group the author concludes: "Agencies which affect metabolic levels, be it directly through hormone control or the endocrine glands, or through the manifold intrinsic functions of the nervous system . . . may be associated with the mental status engendering a behavior problem."—H. Peak (Yale).

470. Rüssel, A. Über Formauffassung zwei- bis fünfjähriger Kinder. (Concerning the form comprehension of two- to five-year-old children.) *Neue Psychol. Stud.*, 1931, 7, No. 1. Pp. 108.—By means of a choice-learning procedure, in which a bell signal served as enticing stimulus, released by the subject himself by pressing upon the positive object, the transposability of form and Gestalt quality of contrasting kinds, such as contoured-flat, thick-thin, large-small, round-pointed, symmetrical-asymmetrical, was established. If the children had learned, for example, in the case of one pair of figures, consisting of a thick and a thin one, always to press the thick one and in this way sound the bell, then in the case of another pair of figures, also thick and thin but otherwise quite different from the learning pair, they again pressed the thick figure. Further, through a critical experiment with the so-called crossed pairs, i.e., pairs of figures containing two of the opposing qualities, a rank order of importance was established, which, beginning with contoured-flat, agreed with the above-mentioned series. The analysis of the child's experience, supported by the relationships observed in the experiment, leads to a postulation of antecedent and early forms of the experience of relations.

These Gestalt qualities in children are shown to be characteristic, unbroken, dispositional, total qualities. Further, it is shown not only that the child's experience is erected on the so-called learning object, but that the negative object is also distinguished in a special manner. The primitive pair experience tends toward an experience of polarity through which the antagonistic qualities are experienced simultaneously as both relative and absolute; and considered in this manner, it is applicable to the state of transposition (brightness, size, etc.).—A. Rüssel (Leipzig).

471. Scupin, G. Lebensbild eines deutschen Schuljungen. Tagebuch einer Mutter. (Biography of a German school-boy. The diary of a mother.) Leipzig: Durr, 1931. Pp. 188. M. 6.00.—This is a diary, month by month, of the activities of a German boy from his sixth birthday to his fifteenth. The naive and emotional responses of the child in various situations have been carefully recorded. There is a complete index so that examples of psychological reactions may readily be picked out.—D. S. Oberlin (Bryn Mawr).

472. Shirley, M. The sequential method for the study of maturing behavior patterns. *Psychol. Rev.*, 1931, 38, 507-528.—The tendency among psychologists has been to explain complex behavior as a linking together of the simple reflexes which are present in the new-born child. Recently it has been discovered that reflexes are themselves differentiated out of more generalized activities involving coordination of the body as a whole. Much evidence is quoted from experiments on animals and on infants, tending to substantiate this fact; but the human studies are handicapped by the difficulty of studying maturation at the human level. The author suggests a method called the sequential method which attempts to determine definite sequences of appearance of behavior patterns correlated with the maturation of structures, and independent of the social, racial, and intellectual scales from which the subjects are selected. This technique has been employed in a study of the rôle of maturation in infants at the Minnesota Child Welfare Institute. After discussing and answering possible criticisms, the author describes the development of a motor sequence in some detail. The findings check with those of Gesell, Burnside, Jones and Bühler. The sequence conforms with certain known principles of growth, such as the anatomical law of developmental direction.—A. G. Bills (Chicago).

473. Smith, M. A study of the unsupervised behavior of a group of institutional children. Nashville: Marshall & Bruce, 1931. Pp. 40.—46 children (25 boys and 21 girls) ranging in age from four to nine were the subjects and were studied in the play room of the receiving home in Nashville, Tenn. The written records of observation by several trained observers showed a reliability of .94. 20 five-minute periods of observation were sufficient to show consistency in the behavior of the child. The behavior was classified under 62 categories. Results show a reliable sex difference in attacking and being attacked

and in "giving." The older age groups showed a reliable difference in surpassing the younger in pattern play and active social behavior. Reliable relationships were sought between the different activities and between the activities and age, weight and height.—*E. B. Heim* (Provo, Utah).

474. Smith, M. E. A study of five bilingual children from the same family. *Child Development*, 1931, 2, 184-187.—The five children discussed in this study are a boy and four girls from the same family who lived part of their lives in China, where the four girls were born, and part in the United States, the country of their parents. A detailed account is given of the individuals, their vocabulary attainments as measured by the Smith Vocabulary Test, and their intelligence scores as measured with the Stanford Binet. The author tentatively concludes that a change of language environment "causes enough mental confusion to a child, when he finds words that have heretofore produced results no longer do so, to cause him to tend to cease further attempts at speech for a time."—*W. McTeer* (Detroit City College).

475. Smith, S. Influence of illness during the first two years on infant development. *J. Genet. Psychol.*, 1931, 39, 284-287.—On the basis of parents' testimony, the mean ages for the appearance of certain developmental traits (head up, sitting up, first tooth, creeping, words, walking, and phrases) in those children in whom a serious illness had preceded the trait's appearance were compared with the mean ages for those traits in children in whom no such illness had preceded. It is concluded that a severe preceding illness reduces the rate of development of a trait to about 88%.—*J. F. Dashiell* (North Carolina).

476. Stiles, C. W. Why certain school children are backward. *Scient. Mo.*, 1931, 33, 362-364.—A correlation was found between incidence of hookworm disease and mental and physical backwardness.—*J. F. Dashiell* (North Carolina).

477. Sundberg, H. M. The effect of surroundings on free association in young children. *Child Development*, 1931, 2, 188-199.—Records were obtained for 60 children, 30 boys and 30 girls, ranging in age from 2½ through 5 years, who were attending the nursery school and kindergarten of the University of Minnesota Institute of Child Welfare. The children were tested first in a room bare of all unnecessary objects, and at another time in a room containing a great number of articles. The children were divided into two groups of nearly equal ability and a counterbalanced order of testing was followed to avoid practice effect. Each experimental period was two minutes in length, and no child was tested twice in the same day. The results may be summarized as follows: (1) higher reliability coefficients were obtained for tests given in the crowded room; (2) correlations between the empty and crowded situations yielded a coefficient of .63 when all words were con-

sidered and one of .89 when repetitions were excluded: (3) in all but one case repetitions averaged less than 2 words; (4) fewer outside associations were given in the crowded room than in the empty room; (5) correlations with IQ were .14 for the crowded and .10 for the empty room; (6) sex differences were small, in most cases favoring the girls; (7) children whose parents belong to the higher occupational classes had more associative responses; (8) correlations between associations and CA were .60 for the empty condition scores, and .78 for the crowded condition scores. The findings are compared with those given by Terman.—*W. McTeer* (Detroit City College).

478. Tumirz, O. Hauptfragen einer Erforschung jugendlicher Charaktere. (The main problems in the study of adolescent character.) *Vjesh. f. Jugendk.*, 1931, 1, 169-181.—The study of the adolescent personality presents problems not found in the adult, because the struggle between the instinctive life and the world of objective values is not yet decided, and the content and form of the inner life fluctuate widely and rapidly while undergoing development. In childhood and adolescence the traits characteristic of the particular stage of development are more important than individual variations, while in adults individual differences stand in the foreground. In the adult, character has become fixed, and is not essentially changed by outside influences. In the child, however, these are of the greatest importance, and most especially the personalities with whom he is in continued relationship. In childhood, the instincts, and above all self-preservation, predominate. Values are impressed from the outside by the authority of adults, and only in maturity are they really comprehended. The so-called "types" of personality hold good only for the adult. Prophecies as to the future character or psychic development of an adolescent are dangerous, because the personality may be changed by a variety of almost imperceptible influences. As to the application of the foregoing discussion to pedagogy: too much individualization is as unsuccessful as mass treatment of pupils. An exact characterological interpretation of each child is attainable only after several years of observation both inside and outside the schoolroom. The study of the individual cannot, therefore, be the starting-point of pedagogical characterology. The guide must be an accurate knowledge of the average picture for a given age. Variations can then be recognized immediately and individual analysis instituted. In order to understand his pupils, the teacher must also know the characteristics of the parents, and above all he must study his own personality, as school life give rise to situations analogous to those in the family drama.—*M. E. Morse* (Catonsville, Md.).

479. Vorwahl, H. Die Sexualität der Jugend. (Sexuality in adolescents.) *Vjesh. f. Jugendk.*, 1931, 1, 182-189.—The predominance of political interests among youth of the present day has pushed the recognition and discussion of adolescent sexuality into

the background, and only the new naturalistic poetry has taken account of the actual present situation. For the first time since the war, the Prussian Kultusministerium has undertaken a systematic investigation of conditions. There have been protests against generalizations from fragmentary evidence, and an attempt is being made to collect documentary material which can be compared with pre-war statistics. Vorwahl treats discursively of the varying attitudes of boys and girls toward puberty; the sex interests of 12-14-year-old girls as shown by their questions; masturbation and exhibitionistic activities in both boys and girls; and the frequency of sexual intercourse (with the use of contraceptives) among students in the secondary schools. The great increase of sex experiences among school-girls since the war is influenced by their knowledge that the excess of women in the population limits the possibility of marriage in their own cases. Transient sex relations and homosexual experiences in adolescence have a social and cultural function in promoting self-confidence and emancipation from parents, and artistic, scientific, and cultural sublimations. The belief that adolescents are in a state of innocence and tranquility represents merely a wish-dream of their deceived elders. On the contrary, they are under great tension and dominated by their fantasies of sex and self-advancement. A harmonious exterior is bought too dearly if it threatens the inner truth. A certain tension is necessary in modern life in order to bring about a higher unity, and its manifestations should not be condemned by moral judgment.—*M. E. Morse* (Catonsville, Md.).

480. White, M. R. Some factors affecting the night sleep of children. *Child Development*, 1931, 2, 234-235.—Records of the night sleep of 34 pre-school children were obtained from parents of the Washington Child Research Center for a period of 30 days. Each parent observed and recorded the time the child went to bed, went to sleep and awakened. There were 15 two-year-olds, 14 three-year-olds, and 5 four-year-olds. "It was found that the average length of the night's sleep of the three groups was nearly equal. The two- and three-year-olds slept 11 hours and 6 minutes, while the four-year-olds slept 11 hours and 2 minutes." "It was thought that the two-year-old children would go to sleep much quicker than three- or four-year-olds. The reverse was true, for the three- and four-year-olds were asleep on the average in 20 minutes, while the two-year-olds took 27 minutes." Correlational studies "indicate that the later the children were put to bed the longer it took them to go to sleep, and the later they awoke in the morning. However, their total length of sleep was shorter than the children who went to bed earlier." Also, the "children with higher intelligence quotients got less sleep than children with lower intelligence quotients."—*W. McTeer* (Detroit City College).

481. Whitley, R. L. Interviewing the problem boy. *J. Educ. Sociol.*, 1931, 5, 89-100.—Suggestions

are given for a method of interviewing boys between the ages of 13 and 19 years; part of a sample interview is included.—*F. D. McTeer* (Detroit City College).

[See also abstracts 157, 310, 311, 312, 385, 499, 507, 520, 523.]

EDUCATIONAL PSYCHOLOGY

482. Anderson, H. J. Correlation between academic achievement and teaching success. *Elem. School J.*, 1931, 32, 22-29.—The results of this study show that the correlations between academic achievement and teaching success are low.—(Courtesy *J. Educ. Res.*).

483. Andrews, G. G., & Anderson, H. R. Achievement tests in world history. Boston: Ginn, 1931. Pp. 95. \$.52, manual, \$.12.—Based upon Robinson, Smith and Breasted's *Our World Today and Yesterday*, to be used either as tests or drill exercises.—(Not seen).

484. Charters, W. W., Rice, M. F., & Beck, E. W. Conduct problems. Grade 4: playing fair. New York: Macmillan, 1931. Pp. 71.—The authors' plan of approach to their aim of character development is through concrete cases of conduct which involve ethical standards. The preview cases call for pupil judgment, which is recorded by the pupils in written answers to questions which are placed after each case quoted. Many situations for study and analysis follow, and the work-book closes with a review in which the questions involve the same principles as did the preview. By comparison the benefit derived by the study may be evaluated.—*E. V. Brill* (Malone, N. Y.).

485. Charters, W. W., Rice, M. F., & Beck, E. W. Conduct problems. Grade 5: what would you do? New York: Macmillan, 1931. Pp. 71.—This work-book follows the same plan of organization and procedure as that prepared for grade 4, viz., "preview cases" for pupils' opinions uninfluenced by the teacher, many incidents involving the same character problems to be studied by pupils and teacher, and a review which calls for pupil judgment after study. It is the hope of the authors that the review answers will reveal a marked advance in knowledge and personal reaction in situations which test character.—*E. V. Brill* (Malone, N. Y.).

486. Charters, W. W., Rice, M. F., & Beck, E. W. Conduct problems. Grade 6: good sportmanship. New York: Macmillan, 1931. Pp. 71.—This work book, like the others in the series, has for its aim the inculcation of ideals which result from a concept of the nature of certain approved acts or traits, and a tendency to copy them in conduct. The concrete cases given in preview, in the situations for analysis, and in the review are adapted to sixth-grade pupils in activities and appeal. They are typical of everyday experiences, so connoting occasions for the practice of desirable conduct.—*E. V. Brill* (Malone, N. Y.).

487. Charters, W. W., Rice, M. F., & Beck, E. W. *Conduct problems. Grade 7: what's the right thing to do?* New York: Macmillan, 1931. Pp. 71.—The central idea of the authors in the matter of character building is that improvement in the ethical life of the child must come through the emotional impact of the lesson content in concrete situations. This work-book carries a challenge to the best judgment of pupils and provides for a record of that judgment in written answers. The questions which follow each division of the work book are stimulating and constructive.—E. V. Brill (Malone, N. Y.).

488. Charters, W. W., Rice, M. F., & Beck, E. W. *Conduct problems. Grade 8: playing the game.* New York: Macmillan, 1931. Pp. 71.—This work-book, which is the last of the series, adheres to the plan of the first four books. Its appeal to the emotions through typical conduct situations enlists the interest of children as a cold intellectual analysis could not do. The test of the preview opens up various lines of conduct possible in certain situations and arouses readiness for the analysis of the specific cases which follow. The problems presented in the five books of the series cover the same character traits, but the illustrative situations are so graduated as to meet the experiences of the different age groups. Teachers' manuals now in press will provide definite instruction for the use of the work-books.—E. V. Brill (Malone, N. Y.).

489. Collings, E. *Progressive teaching in secondary schools.* Indianapolis: Bobbs-Merrill, 1931. Pp. 544. \$2.40.—(Not seen).

490. Eulich, A. C. *A method for measuring retention in reading.* *J. Educ. Res.*, 1931, 24, 202-208.—Framing of a test consisting of questioning by the method of multiple choice after reading a section of several pages. A method of scoring is outlined. The test is called the Minnesota Reading Examination Xi XIII, and two forms have been worked out. Reliability is ascertained as well as scholarship correlations. When applied to several groups the results indicate a considerable gain in information from the reading process with a relatively small amount of loss during an interval of one week.—S. W. Fernberger (Pennsylvania).

491. Good, O. V., Collins, W. L., & Gregory, C. A. [Eds.] *Abstracts, graduate theses in education. Vol. I. Cincinnati: Teachers College, Univ. of Cincinnati, 1931. Pp. xxv + 396.*—A volume of abstracts of masters' and doctors' theses from 1927 to 1931 inclusive. The volume includes an introduction by Louis A. Pechstein, Dean of Teachers College, and a complete list of theses accepted, 1924-1931. Among the abstracts of doctors' theses are the following: *A Comparison of the Academic Achievement of Cincinnati Negroes in Segregated and Mixed Schools* by Mary A. Roberts Crowley; *The Attitudes and Interest of Teachers and Prospective Teachers* by Gordon Hendrickson; *Factors Conditioning Efficiency in a Motor Skill* by Rex L. Hoke; *Student Leadership in Ele-*

mentary and in Junior High School and Its Transfer into Senior High School by Isabelle J. Levi; *An Analysis and Evaluation of Student Responses Involved in the Measurement of Reading Comprehension* by Spencer Shank; *Whole and Part Methods in Learning as Affected by Practice* by Cary C. Wood. Among the masters' theses are the following: *A Study of Two Special Types of Pupil Responses as Measures of Reading Comprehension* by Claude C. Dove; *The Relation of Interests to Success in Electrical and Automotive Trades Training* by Tillie D. Howell; *A Study of Age, Attendance Records, and Achievement Records of Parochial School Pupils Entering Certain Junior and Senior High Schools* by Howard L. Luedeker; *The Leisure Time of the City Adolescent* by Margaret C. Lusby.—R. M. White (Worcester, Mass.).

492. Guller, W. S. *Improving college freshmen in spelling.* *J. Educ. Res.*, 1931, 24, 209-215.—Report of a program of diagnostic testing and remedial instruction in spelling at Miami University. A list of 50 words with extreme variability regarding difficulty forms the basis of the test. A total of 350 cases are considered. The results show that college freshmen vary very widely in spelling ability. The question of improvement is discussed in the light of experimental results.—S. W. Fernberger (Pennsylvania).

493. Heege, F. *Gemeinschaftsarbeit im Grundschulunterricht.* (Group work in primary school instruction.) *Dtsch. Schule*, 1931, 35, 407-412.—After placing emphasis upon the effect of environmental influence and training as character determinants, the author points to the value of group activity as a means to development. Life plays between two poles, egoism and altruism. To illustrate the theory of individual development through the group, with self-stimulation to learning, the author cites a school situation in which a group retarded in reading made significant progress in order to meet the demands entailed by the group-chosen project. Moreover, character-building results through adjustment and co-operation. The primary school has for its object not projection upon child life, but training and instruction combined through work accepted by the individual as a unit in the group.—A. B. Herrig (Michigan Central State Teachers College).

494. Hendrickson, G. *Attitudes and interests of teachers and prospective teachers.* In *Abstracts, Graduate Theses in Education.* Cincinnati: Teachers College, Univ. of Cincinnati, 1931. Pp. 98-134.—The author gives the result of his study of certain personal characteristics of teachers as an occupational group which have received little attention heretofore. In his research the attitudes and interests of several groups of women in Teachers College, University of Cincinnati, were studied. By means of questionnaires and a battery of tests data were secured and tabulation was carefully made. The summary is organized under six headings: general, social and economic background, intelligence, community of response, leisure-time activities, and

attitudes and interests. Comparisons are made between the groups. The author disclaims any attempt to develop methods for selection of teachers, but suggests several important problems for further investigation.—*E. V. Brill* (Malone, N. Y.).

495. Jones, E. B. [Ed.] *Improvement of study habits*. Buffalo: Kenworth Printing Co., 1931. Pp. 118.—Chapters on reading, note-taking, memory devices, use of the library, preparation of term papers, creating interest and developing concentration, reasoning in mathematics and science, mental hygiene for the student, preparing for and taking examinations.—*M. B. Jensen* (Bowling Green, Ky.).

496. Keim, S. L. *The present status and significance of manuscript writing*. *J. Educ. Res.*, 1931, 24, 115-126.—The recommendations for manuscript writing are its legibility and beauty, the ease with which it is acquired, the acquisition with less fatigue for the beginner, the elimination of the learning of a separate alphabet for reading and writing, and the fact that the beginner can produce more legible results. A questionnaire shows that the number of schools which have adopted manuscript writing has increased from 4 in 1920 to 152 in 1929. Also, more grades in these schools are giving work in this kind of writing, especially in the higher grades. 85% of the schools which have adopted manuscript writing report testing some phase of the results obtained.—*S. W. Fernberger* (Pennsylvania).

497. Maney, C. A. *Does the church college develop character?* *School & Soc.*, 1931, 34, 576-578.—After questioning a group of college freshmen concerning the factors which they believed influenced their characters, the author concludes that the rank order according to character-molding potency of the four following classes of influences is home, associates, general experience, and professional education including church and school. Students' associates and the example of the faculty are alleged to modify character more than secular or religious instruction.—*H. L. Koch* (Chicago).

498. Merry, R. V. *An experiment in teaching tactual reading to seeing subjects*. *J. Genet. Psychol.*, 1931, 39, 407-413.—After nearly five and a half hours of distributed, intensive, individual instruction, two superior college students with normal vision failed to reach first-grade standards in tactual reading of Braille type. The subjects obviously interpreted their tactual sensations into visual images, making their reading processes quite different from that of blind children. It is suggested that a seeing teacher should hardly be expected to master the mechanics of tactual reading.—*J. F. Dashiell* (North Carolina).

499. Muchow, M. *Anleitung zur psychologische Beobachtung von Schulkindern. Unter besondere Berücksichtigung der Grundschulverhältnisse*. (Guidance in the psychological observation of school children. With special consideration of elementary school children.) Leipzig: Barth, 1931. Pp. 20.

M. 50.—These pages serve the purpose of guiding and stimulating the teacher to deeper psychological observation of elementary school children. They are not a further set of questions added to the many existing ones, but a collection of what has already been done in the way of activity and observation opportunity in elementary school affairs. They are to aid in the working out of pupil characteristics, in so far as there is an analysis of the life of the child in elementary school, and they are to guide, by working out the possibilities of observation, to a deeper comprehension of individualities. Their purpose is to assist in compounding a list of fundamental psychological characteristics, so that making out a character sheet for a child who has left school is not a hard task. There is an analysis of the part played by home environment, physical condition and development, mental development and individuality of the child. In the last naturally extensive portion, the development of conventional and social traits (the position of the child in regard to himself, to the family, to the school society, to animals, plants, objects, and values) and the development of individuality and ability is analyzed. Play and work as the fundamental activities of the child in its first school years are dealt with as materials for observation. The bibliography contains a selection of essential literature on the question of observation of pupils and personnel inventory.—*M. Muchow* (Hamburg).

500. Patty, W. W., & Painter, W. I. *Technique for measuring the vocabulary burden of textbooks*. *J. Educ. Res.*, 1931, 24, 127-134.—With the use of Thorndike's *Teachers' Word Book* and a system of weighting including a consideration of the length of the text, the authors work out an average-word-weighted-value by a system of sampling.—*S. W. Fernberger* (Pennsylvania).

501. Pitkin, W. B. *How we learn; a book for young people, with emphasis upon the art of efficient reading*. New York: Whittlesey House, McGraw-Hill, 1931. Pp. 263. \$1.00.—(Not seen).

502. Riedel, K. *Pädagogische Pläne auf erfahrungseelenkundlicher Grundlage*. (Pedagogical plans based on knowledge gained through experience.) *Dtsch. Schule*, 1931, 35, 533-540.—An evaluation of the contributions of Richard Seyfert in his statement of aims, methods and materials of instruction, and a comparison with other German writers, with special reference to the needs of the *Volksschule*. The similarity of Seyfert with Friedrich Dittes is apparent. Dittes finds his bases for the school program in objective comprehension, subjective comprehension, and technical activity; Seyfert in comprehension, feeling and instinct activity. Dittes stresses the physical, intellectual, esthetic, moral, religious, and Seyfert the technical, intellectual, moral, esthetic and religious.—*A. B. Herrig* (Michigan Central State College).

503. Roels, F., & Spek, J. v. d. *Handleiding voor psychologisch onderzoek op de school*. (Guide to psychological investigation in schools.) 's-Hertogen-

boech, Ingen.: Malmberg, 1930. Fl. 2.75.—The preface to the second edition of this book stresses the importance of the method of systematic observation in the psychological study of the school child. Some of the tests which appeared in the first edition have been rejected as unsuitable. The book is intended primarily as a guide in educational psychology and not mainly for vocational guidance, although it is, of course, difficult to draw a sharp line between education and vocational guidance, especially in high schools. The system according to which the test batteries have been arranged is explained. The book is an aid to teachers and student teachers who wish to gain insight into psychological observation and practical guidance in its practice, and it also has possibilities for usefulness to vocational advisors.—*E. M. Pilpel* (New York City).

504. Sims, V. M. The objectivity, reliability and validity of an essay examination graded by rating. *J. Educ. Res.*, 1931, 24, 216-223.—Two forms of an essay examination were given to 80 students who had just completed a topic in psychology at the University of Alabama. Each form consisted of 10 questions chosen at random from a complete set of 20 prepared questions. The results of the essay examinations were compared with an objective test of 40 true-false statements and 34 completion elements. The essay examinations were graded by from 3 to 6 markers, by the rating method. The average coefficient of objectivity was .77 for the essay form. The coefficient of reliability was .73, which was about 10 points lower than that found for the objective form on the same material. The average correlation between the essay and the objective scores was .70.—*S. W. Fernberger* (Pennsylvania).

505. Symonds, P. M. Shall the I.Q. be used for sectioning in the high school? *J. Educ. Res.*, 1931, 24, 138-140.—By correlating 9 achievement tests with the scores of the same number of intelligence tests for both raw score and IQ the results come out with an average difference of about .02 in favor of the IQ.—*S. W. Fernberger* (Pennsylvania).

506. Warden, C. J., & Cohen, A. A study of certain incentives applied under schoolroom conditions. *J. Genet. Psychol.*, 1931, 39, 320-327.—Previous studies of motivation in school work have seldom been under strictly school-room conditions. In the present study were measured the effects of a continued story, a game, reproof, praise, an Easter party, and an open-air play, upon routine school work in the fourth grade, consisting of five-minute exercises on the Thorndike addition sheets. The values of the several incentives varied considerably both within the same sex and between the sexes. In general, they were manifested in the accuracy of work but not in the speed. Drill scores correlated more highly with arithmetic and general school grades than with IQ.—*J. F. Dashiell* (North Carolina).

507. Woody, C. The arithmetical backgrounds of young children. *J. Educ. Res.*, 1931, 24, 188-201.—An attempt to discover the amount of arithmetical

knowledge of children in the primary grades. An inventory test of 204 items selected with regard to the social environment of the child, with regard to the various aspects of the number concept and of sufficient simplicity for use with children as young as of kindergarten age, was given by grade teachers in 39 school systems in the United States. Results of a total of 2,895 cases were studied from kindergarten to grade 2 B, but with great concentration in grades 1 A and B. The results indicate that children "possess much ability in the elementary processes of arithmetic even before the time of beginning formal instruction in the subject," such as an elementary knowledge of fractions, United States money and the like, as well as counting and simple adding combinations. A slight but persistent superiority was demonstrated for boys over girls.—*S. W. Fernberger* (Pennsylvania).

[See also abstracts 233, 444.]

BIOMETRY AND STATISTICS

508. Bortkiewicz, L. v. The relation between stability and homogeneity. *Ann. Math. Statist.*, 1931, 2, 1-22.—(*Soc. Sci. Abst.* III: 18315).

509. De Gleria, A. Sul calcolo della differenza media. (The calculation of the average difference.) *Riv. ital. di statist.*, 1930, 2, 155-161.—(*Soc. Sci. Abst.* III: 18311).

510. Dilger, J. Gruppeneinteilung bei der Gausschen Kurve. (Subdivision into groups according to the Gaussian curve.) *Indus. Psychotechn.*, 1930, 7, 258-264.—A theoretical analysis leads to the conclusion that the best division of the Gaussian surface, to be adopted as standard, is a grouping into the following percentages: 11, 23, 32, 23, 11.—*A. W. Kornhauser* (Chicago).

511. Pearson, E. S. Note on tests for normality. *Biometrika*, 1931, 22, 423-424.—(*Soc. Sci. Abst.* III: 18319).

512. Pearson, E. S. The test of significance for the correlation coefficient. *J. Amer. Statist. Ass.*, 1931, 26, 128-134.—(Courtesy *J. Educ. Res.*).

513. Pearson, K. On the nature of the relationship between two of "Student's" variates (z_1 and z_2) when samples are taken from a bivariate normal population. *Biometrika*, 1931, 22, 405-442.—(*Soc. Sci. Abst.* III: 18313).

514. Potthoff, E. F. A comparison of three methods of computing composite scores. *J. Educ. Res.*, 1931, 24, 224-227.—Comparison of composite scores of National Intelligence Tests by means of percentile scores, raw scores and standard scores. The distribution of the standard scores more nearly approximates the normal distribution. Coefficients of correlation between the different methods are all very high.—*S. W. Fernberger* (Pennsylvania).

515. Prak, J. L. An empirical research on the reliability of correlation coefficients. *Brit. J. Psychol.*, 1931, 21, 394-403.—The correlation was de-

terminated between a number of tests and the total score of a series of other tests, for an entire group of 152 subjects, as well as for groups of 30, 20, 15, 10 and 6 subjects; it was thus possible to examine empirically how far such small groups still gave a reliable correlation coefficient. Because in addition to the errors of random sampling, those deviations which had their cause in the nature of the experiment were important, a short description of the tests and of their attending circumstances is given. It was found that for every test and in every sub-group the actual correlation agreed fairly well with the theoretical figures; as regards the correlations having the largest deviations, those which amounted to two, three or four times the probable error, practice and theory again agreed rather well, the coefficients of the larger deviations also following with sufficient accuracy within the limits denoted by the formula.—*M. Drury-Smith* (Cambridge, England).

516. Thiele, T. N. The theory of observations. *Ann. Math. Statist.*, 1931, 2, 165-307.—(*Soc. Sci. Abst.* III: 18290).

517. Thurstone, L. L. Multiple factor analysis. *Psychol. Rev.*, 1931, 38, 406-427.—The purpose of the paper is to describe a more generally applicable method of factor analysis which has no restrictions as regards group factors and which does not restrict the number of general factors that are operative in producing the intercorrelation. Applications of the method to different types of correlation problems are suggested.—*A. G. Bills* (Chicago).

518. Todhunter, J. History of theory of probabilities. New York: Stechert, 1931. Pp. 640. \$7.50.—(Not seen).

519. Wishart, J. The mean and second moment coefficient of the multiple correlation coefficient, in samples from a normal population. *Biometrika*, 1931, 22, 353-367.—(*Soc. Sci. Abst.* III: 18314).

[See also abstracts 301, 337.]

MENTAL TESTS

520. Aldrich, C. G., & Doll, E. A. Comparative intelligence of idiots and normal infants. *J. Genet. Psychol.*, 1931, 39, 227-257.—Tests from three genetic scales (Kuhlmann-Binet, Gesell, and Stutsman) were administered to twelve idiot boys, aged chronologically 8 to 15 and mentally 19 to 38 months, and to twelve normal infant boys aged chronologically 19 to 38 months. (1) The idiots were inferior on the Kuhlmann-Binet, especially on the language tests; (2) they were equal to the normal on the Gesell tests, but with greater spread, offsetting inferiority in language with superiority in tests involving experience; (3) the idiots were much superior on the performance tests of the Stutsman series. Notes on differences in observable personality traits are included, also detailed tables and summaries of test results.—*J. F. Dashiell* (North Carolina).

521. Barton, W. A. Improving the true-false examination. *School & Soc.*, 1931, 34, 544-546.—The author opposes the R-W way of scoring true-false tests and proposes as a substitute crediting the student with all questions correctly answered but requiring him to cross out in each statement he considers false the word or words which make it so. This latter method is alleged to increase the reliability of the examination (especially if it is short), to reduce guessing, to encourage reasoning, to aid in the diagnosis of the student's misapprehensions, to make the teacher more critical of his questions, and to obviate the necessity of having an equal number of right and wrong statements.—*H. L. Koch* (Chicago).

522. Bayer, E. Die wichtigsten Prüfungstypen und ihre Verhaltensweise bei der Eignungsprüfung. (The most important types of examinees and their behavior during aptitude tests.) *Indus. Psychotechn.*, 1930, 7, 279-284.—The following types of examinees are described, with examples: the well-behaved, the over-zealous, the sensitive, the loquacious, the resistant, the "fresh," the cheat and malingerer.—*A. W. Kornhauser* (Chicago).

523. Decroly, O. La valeur du quotient intellectuel chez les enfants anormaux. (The value of the intelligence quotient in abnormal children.) *J. de neur. et de psychiat.*, 1930, 30, 985-998.—The author believes that the customary procedure of establishing the intelligence quotient based on the mental and chronological ages is without value after the age of 14. For individuals above that age the test must be based on another criterion than that of chronological age. Examination by verbal tests should in all cases, especially in individuals with a low IQ, be supplemented by an examination of aptitudes other than verbal.—*H. Sys* (New York City).

524. Hirsch, N. D. M. Genius and creative intelligence. Cambridge: Sci-Art, 1931. Pp. 339. \$4.50.—In the first part an attempt is made to interpret the nature of man by analyzing his socio-historical development, his methods and means of adjustment, and some of his future possibilities, the argument being made that geniuses have been the greatest single factor in man's socio-historical development. In the middle section the author analyzes man's innate drives and his psychological constitution. The last portion is concerned with the nature, function, and uniqueness of genius.—*H. Caron* (Wisconsin).

525. Peatman, J. G. A study of factors measured by the Thorndike Intelligence Examination for High School Graduates. *Arch. of Psychol.*, 1931, No. 128. Pp. 56.—Are there any functions common to the battery of tests making up the Thorndike Examination? What light do the relationships between the various groups of tests of the battery and the functions attributable to the total examination throw upon the nature of any common and specific or other functions that the examination may measure? What

light do the relationships between the various groups of tests of the whole examination and various criteria of college achievement throw upon the nature of any common and specific or other functions that the examination may measure? Is the Thorndike Examination a valid or adequate measure of general scholastic ability? An analysis of the examination records of 568 male candidates for admission to Columbia College was made. The battery of tests set up from the total examination satisfied the criterion for a common factor and specific factors when the reading comprehension tests were combined with the verbal ability tests. The estimates were made that 75% of the variance of the total examination could be attributed to the common factor, 10% to the specific, and 15% to chance errors of measurement. Whether the common functions measured by the examination can be characterized as general scholastic ability is very doubtful, unless by general scholastic ability is meant nothing more than verbal ability plus factors dependent upon the testing situation. It is very improbable that the concept "general scholastic ability" can be adequately defined in terms of verbal ability plus factors dependent upon the testing situation.—E. M. Achilles (Columbia).

526. Reinhardt, M. A scale for measuring the g-factors in intelligence. *Cath. Univ. Amer., Stud. Psychol. & Psychiat.*, 1931, 2, 1-42.—The author has attempted to determine whether there is one g-factor or several, by means of a battery of tests in the cognitive group and the attention group, using the Spearman criteria, and a new method of partialing out and reintercorrelating. As the various variables were partialled out, the correlation found between the two measured g-factors approached zero, from which the assumption is made that there is but little in common between the factors of each group, and that dif-

ferent general factors underlying different abilities may be postulated.—D. S. Oberlin (Bryn Mawr).

527. Walker, D. A. Answer-pattern and score-scatter in tests and examinations. *Brit. J. Psychol.*, 1931, 22, 73-86.—This paper attempts to investigate the theoretical basis of the predetermination of the score-scatter due to the examiner's choice of questions; it gives an account of an experiment in which tests were designed on this theoretical basis to give score-scatters of given types. The problem was a dual one: (1) How, and (2) how far, do the examiner's plans predetermine the score-scatter? To tests composed of independent items the following conclusions were found to apply: (1) The factors predetermining the character of the score-scatter were the individual and relative difficulties of the questions; the graph or table of this was called the answer-pattern, each type of answer-pattern tending to produce its own type of score-scatter, and the curve of the latter tending to be the differential of the curve of the former. (2) The factor of "hig-gledypiggledyness," ("hig"), influenced the extent of predetermination, complete absence of "hig" leading to complete dependence of score-scatter on the answer-pattern. (3) The incidence of "hig" depended on the steepness of the answer-pattern of the test; it was therefore possible to predict from the answer-pattern the most probable type of score-scatter and also the degree of "hig." (4) The coefficient h provided a measure of the incidence of "hig" in the tests. (5) It was found that the difference of difficulty between the questions was the factor which determined whether a test would open out the top or the bottom candidates.—M. Drury-Smith (Cambridge, England).

[See also abstracts 67, 354, 436, 441, 505, 514.]

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